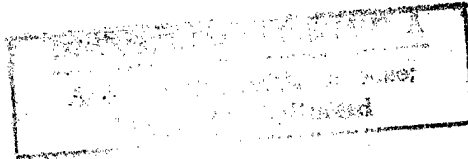


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# East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2278

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10 June 1982

# EAST EUROPE REPORT

## ECONOMIC AND INDUSTRIAL AFFAIRS

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## FARMS FAIL TO BENEFIT FROM TESTS OF RESEARCH INSTITUTES

Tirana ZERI I POPULLIT in Albanian 3 Apr 82 p 3

[Article by Halil Lalaj: "Where Are the Experiments of the Institute for Corn and Rice To Be Found?]

[Text] The Institute for Corn and Rice in Shkoder has for a number of years achieved quite good results in creating seeds with a high productive capacity, suitable for various zones of the country, with a high content of fodder substance and so forth. This entire work along with the discovery and processing of the agrotechnology and of the respective technologies of production and the careful progress, have enabled this important scientific institution to consolidate its achievements. This end product is by now well-known. Experience on the other hand is broad, complex and we think that it deserves a thorough knowledge and implementation. But in this article we will deal with something else, with a new experience which is being formed to fully integrate the institute with the expanded production. And therefore, although the institute possesses a few hundred hectares of land for production and for its own experiments, it nevertheless broadens "properties" and extends the limits. But what are these limits and "properties."

Throughout the country there is to be found an extensive network of experiments for every agricultural crop or for livestock carried out by many scientific institutions for agriculture. In these institutions records are kept for the types of seeds and breeds, technologies and production capacities: more than 100 quintals of corn, 70 quintals of wheat, 250 quintals of fodder units per hectare, 5,500 liters of milk per cow, or 250 liters per sheep. And so on. Of course these constitute the group of the best data of the experiments. But why is it that often the neighboring soils which are of good quality fail to give good results? We often raise this question for the causes and the reasons. But using this "station" as evidence leads one to another harmful idea, namely that while an idea can be theoretically proven in an experiment, wide production is something else, without practical conditions and possibilities. Can this be true? For some time now, the experts of the institute have been concerned about how to combat these attitudes. Therefore, a few years ago they started going to the plains, into corn brigades or agricultural activists of the districts to discuss, consult, and ask for opinions. Their fields of experiments are found everywhere where there is broad production. They are found there so the data can be as true as possible, realizable, and the production can keep an

"eye" on the experiment. Thus the network of the progressives, has been expanded; there are entire brigades in the corn fields: in Myzeqe, Mirdite or Diber, in Vrine or Dajc, and they all shorten the distance which existed between them and the experiment cadres. Isn't there, among other things, also the sweat of the specialist, of the selector, of the scientist?

It is known that in order to produce a ton of corn, about 700 cubic meters of water is required. But is there a calculation about the water which is used, when and how it is used? In experiments, yes, but seldom in the general production. According to the conditions (climate, soil) corn requires 7-10 waterings. In practice it happens that there are less than three. In such cases, growing stops. It has been verified and it is a known fact that if the crop remains only one day in place, production can drop by up to 1.4 quintals per hectare. This is a conclusion which forces one to make good calculations. Another case. In the seventh leaf, the corncob is formed which requires the established treatment of cultivation and soil work. But often they are late in growing. Then only an underdeveloped corncob can be expected to grow. The biological processes are irretrievable, according to the specialists. Irretrievable also are the losses. One can continue still further with such moments which for the institute constitute an important object of the work and which studies, methodologies and so forth, mention. But is the work of this collective limited only to these studies and methodologies?

A specialist of the institute said: "Have you noticed during campaign time when reports are delivered. They talk about hectares, labor force, tractors and no more. It is said, for example, that out of 20 tractors only 15 function. Telephone calls are made about those 5 which do not function. This is a good thing. But why don't they ask, let us say, also about the cultivator, whether it functions, how it performs and what kind of work it performs? Because the tractor is only the multiple of the ox, it is the aggregate which fulfills the agro-technology. We are not talking here simply to prove something. One may prove it, but the question is to have it fixed in one's mind."

But what is the role of the tractor, the pick or the cultivator in the work of a research institute, such as this one for corn and rice? Maybe this is the reason which leads to extending the limits and expanding the "property." It is precisely to deal with these problems that the Institute for Corn and Rice went to Dajc last year. How did it deal with them and what corner did it find for these works which do not "appear" so scientific? The specialists of the institute sat down with their comrades in the cooperative, with the agronomist and zoologist, with the simple farmer and the mechanic, they got together with the brigade staffs, the chairmanships and with the party bureaus to examine those paths which assure the full implementation of technology. For the 67 corn plots in Dajc there are 67 files containing detailed data. This is a requirement for scientific treatment. But those files cannot be kept for looks, not even in the name of some issued order. They are kept because if the plot is sown in one day, it must be tended, watered and so forth, in one day too. It is difficult, someone may say, since a plot of 10-12 hectares is not an experiment of 100 meters. This is difficult, but because it is so, it has been also necessary to think, to do research, to experiment in the field of organization, in the management of forces, means, technology, what is the most effective

division of tasks, what will the organization and the "military" pace of work be. Isn't this also some kind of experimental field in which there is concentrated the common thought of the specialists and of the managers of the economy and of the specialists of this scientific institute. And in this way, Dajci becomes an example not simply because it sowed this or that kind of seed or, it watered so much, but because a whole complex of problems and a system of scientific solutions stand behind them.

In Shkoder, there is a central station of zoology. The yield of pork which is obtained there, as well as the yield of eggs and the fertility of mares are among the highest. Nevertheless, the district does not come close to these results, and no unit has reached the level of the station. According to an old saying, the grapes ripen by looking at each other, but no one looks at the station. It is closed within its own walls, within the lands, its own herds. This is also why many know it not as a scientific institute, but simply as a dairy enterprise. And if we take it one step further, why is it that in none of the agricultural units of the district do we find not even one technique devised by this institute and suitable for the conditions of the economy? The specialists of the station state, not without concern: we just don't know how to correct this situation. The experience is very close, related. It is complete and varied. And if there are also problems of some cadres, they are not issues that cannot be solved by the station itself, by the Institute of Livestock Research or by the ministry. The question is to have a more complete and broader understanding of the tasks.

Lately especially, in the work programs of some scientific institutes of agriculture there are also some instances of guardianship. Their specialists even go into the units. Still, often their work is not effective. There are, for example, problems with the potato, with its seeds and biology, a well-conceived problem of the respective institute which must yield speedier and scientific solutions. But the units also need technical help. There are problems for the forests or for fruitgrowing, where year-long studies have also been carried out in the districts. But why is it that the respective institutes stand idle or come and go without leaving any traces? The experience of the Institute for Corn and Rice shows clearly: the technology is put into practice by man, with his knowledge, with the material base, with the organization of discipline. And here, too, science is needed to avoid gaps. The specialist, the scientist must once again lead. This, for the institute, is not outside the fields of experiments of generalizations. Of course, the ordinary organizational projects which violate the objective of the main tasks must be avoided.

5112

CSO: 2100/61

## CZECHOSLOVAKIA

### INCREASING IMPORTANCE OF PRICE MANAGEMENT DISCUSSED

Prague HOSPODARSKE NOVINY in Slovak 23 Apr 82 p 6

[Article by Engr Jan Knotek of the SSR Ministry of Industry, Bratislava, and Engr Maria Vlckova of the Institute for the Economics of Industry Management, Bratislava: "A Contribution to the Timely Questions of Price Management. A Means or an Instrument?"]

[Text] An important task of our economy in the present stage of its development is also an increase in the effectiveness of price management, for the purpose of making the central planning of the development of prices more systematic, and of bringing the price system up to date. The functions of prices must be implemented more effectively in economic practice, through the methods of the planned management of prices. Price planning itself is a complex instrument for the management of prices and includes not only the stage of analysis and of identifying the necessary changes, but also the balancing of the impact of price changes and the pricing of new products. The present article discusses some of the intentions in this area within the SSR Ministry of Industry.

Development of a system and methods for the five-year planning of prices is a very extensive and demanding area that includes, besides perfecting the system of price management and a permanently functioning information system, particularly the establishment of firm links between the price plan and the other parts of the national economic plan.

One of the specific forms of price planning for the period of the Seventh Five-Year Plan is a one-time adjustment of the wholesale prices, carried out in two phases, as a part of the set of basic measures to rationalize the consumption and use of fuel and energy in the national economy. The one-time increase of the wholesale prices of fuels, energy and certain other imported raw materials as of 1 January 1981 was projected on the specified scale into the wholesale prices of related products as of 1 January 1982.

#### Rationalization of the Functioning of Prices

In order to exert greater economic pressure for reducing the specific consumption of fuels and energy, the gradual rise of their wholesale prices will continue in 1980-1985, at an annual rate of 2 percent in relation to the prices that were in effect in 1978.

The impact of the higher wholesale prices and the selected procedure--i.e., the one-time adjustment of wholesale prices combined with a gradual annual increase of the prices of fuels and energy--will significantly influence the conditions of economic activity within the economy. There will be greater economic pressure on the enterprises, aimed at their incentive to utilize fuels, energy, raw materials and supplies more effectively. Phased realization of the one-time adjustment of the wholesale prices in 1981 and 1982 requires projecting the impact of the prices into the plan and the economic instruments during the Seventh Five-Year Plan.

Another area of the price system's rationalization under the Seventh Five-Year Plan is the application of demanding technical-economic parameters from the external economic relations to the intraenterprise system of wholesale prices.

The mastering of the outlined problems by means of suitable planning and pricing methods, and with suitable instruments, is the general target solution in the area of rationalizing the price system within the Ministry of Industry. Perfection of the system of planned price management in the ministry presupposes the creation of suitable methods and instruments that will enable prices to effectively influence primarily the utilization of quality and production volume, and to perfect the production structure from the viewpoint of the output's social utility. Furthermore, to influence the reduction of costs in accord with the socially necessary costs, and also the development of the warranted profitability and profit rate.

The following basic principles apply to price management within the ministry:

--The plan is the basis for managing the socialist economy; price planning is an integral part of the economic plans and the principal link in the system of price management;

--The function of price planning within the SSR Ministry of Industry is performed by the annual plans, the five-year plan, and by the appropriate methods for analyzing, setting, implementing and controlling prices;

--Price planning presupposes the use of suitable instruments, particularly of mathematical methods, in such a way that will promote the integration of the system of price models withing the hierarchy of production enterprise--intermediate supervising organ--ministry--state price management (national price offices, FCU [Federal Price Office]);

--The price system's rationalization at the level of the SSR MP [Ministry of Industry] requires the establishment of a complete and up-to-date data base, in accordance with the requirements of the decision-making process, using computers.

#### Plan and Prices Must Be Harmonized

An important task will be to revise the connections between the price development plan and the other parts of the plan, in every stage of planning and at every level of management. This ties in with one of the basic prerequisites for price planning: that the feasibility and advisability be considered of breaking down the costs by production sectors in the five-year plan of the economic production unit and of the ministry. This requirement stems from the fact that the price development plan and its entire information base are founded on the principle of classifying information

by sectors, while the other parts of the plan are in the nature of classifying information according to an organizational breakdown.

The greater demands on the quality of work and the pressure of time in the area of prices have raised the question of the motivation of price workers and of their professional qualifications. For it has become evident that there is also a greater need to use computers. Upgrading the qualifications of workers in the area of price management is a lengthy process, and in the future it is necessary to anticipate also changes in the structure of professional workers in the area of prices. When building information and management systems at present, their designers and initiators are mostly technicians. In the future it will be necessary to make greater use of the knowledge of economists who will elaborate the substantive aspects and content of the data for price purposes.

Linking the planned development of costs to the development of prices is a basic problem that clearly manifested itself in the recomputation of the plan at the new prices in 1977, after the complex revision of wholesale prices. This problem remains timely even after the one-time adjustment of wholesale prices as of 1 January 1982.

From a comparison of the methods employed in revising the wholesale prices as of 1 January 1977, and in the one-time adjustment of the prices for the Seventh Five-Year Plan as the basis of the medium-range planning of wholesale prices, it follows that the comprehensive revision of wholesale prices as of 1 January 1977 provided the starting base for the system and methods of medium-range price planning. After certain modifications and refinements, there followed the one-time adjustment of the prices of fuels, energy and selected production sectors, for the Seventh Five-Year Plan. The basic source of information in both cases was a set of cost calculations for selected products and groups of products in the base year, corrected for the so-called objectivizing effects. The cost calculations were then assigned for processing to coordination managers, new prices were proposed, and the impact of adjusting the wholesale prices was calculated.

#### Costing as a Complete System

There has clearly arisen also the problem of a suitable information system for planning the development of prices along the entire hierarchy of management, from the production enterprises through the intermediate supervising organs to the supreme price organs. An important role is played by the price coordination managers. They summarize the basic data, elaborate proposals for the new prices, and monitor the production sectors' compliance with the price level and price parity.

Preference for the criteria of effectiveness and quality is the main idea underlying the perfection of the national economy's planned management, and it is to be widely implemented under the current five-year plan. In conjunction with the changeover to the factors that intensify the production process, there is renewed interest in costing as one of the significant instruments in the process of management and decision making. A basic prerequisite for its effectiveness is that it function as a complete system of pre- and post-costing.

From this point of view, solution of the problem concentrated on the elaboration of a general model that at the branch level provides basic information about the planned

indicators, in an organizational-sectoral breakdown. Work focused on using computers for price purposes at the level of the SSR Ministry of Industry.

The actual computations are per unit of product and also per volume of sales. On the basis of these computations it is possible to calculate also other economic indicators (both starting indicators for the year, and resultant indicators after the assigned changes). This applies to the computation of processing costs, cost intensity, profitability in relation to production cost plus R & D, profitability in relation to processing costs, material intensity, and the index of price change.

An important factor in constructing such an organizational-sectoral model of costs and prices is a detailed breakdown of the input information, by products, groups of products and production sectors.

At present this system of computations, tested only experimentally so far, is entering the phase of practical application. With its help it is possible to analyze in detail the costs and prices, by products, groups of products and production sectors. An advantage is that, at the ministry level, it is already possible to operate with a smaller volume of data, and to compute various alternatives. Another area where it can be used is the quantification of the changes in the prices of raw materials and energy, and of the changes in the assortment and production volume in various planning periods.

1014

CSO: 2400/230

## SITUATION OF SMALL ENTERPRISES IN CZECHOSLOVAKIA SCORED

Budapest FIGYELO in Hungarian 19 May 82 p 9

[Article based on a report published in HOSPODARSKE NOVINY, Prague]

[Text] One of the unsolved problems of the Czechoslovak economy is the chronic lag of small-scale production and of the service industries. The situation is further aggravated by large-scale industry's inability to flexibly adapt to the daily changing major and minor needs of the population and of the economy. The reasons for small-scale industry's unfavorable situation are not only objective ones (a relative shortage of manpower) but primarily subjective ones: the role of small and medium enterprises in a developed socialist economy long remained unrecognized and was even denied. Yet such enterprises are an integral part of a socialist economy.

The question centers on the optimal size of socialist enterprises. (An enterprise of optimal size is one that can best fulfill its functions and is able to perform its tasks with the smallest capital outlay.)

On average in Czechoslovakia, state industrial enterprises operate with 3,400 workers; industrial enterprises managed by local authorities, with 205; municipal service enterprises, with 852; and industrial cooperatives, with 437. At the same time the average enterprise's workforce is 750 in the Soviet Union, 320 in the GDR, 550 in Poland (counting only the socialist sector of industry), about 52 in the United States, 44 in West Germany, and 20 in Japan. Subjective reasons, including the gigantomania of enterprise managers, also contribute to the considerable differences.

However, technical and production conditions have the greatest influence on enterprise size: the sectoral structure of production, the technology, and the level of the social division of labor. The largest enterprises are in metallurgy, engineering (particularly in the automotive industry), in the textile industry, etc. The relatively smallest enterprises can be found in the lumber and woodworking industry, and in the printing, clothing and food industries.

Enterprise size in itself is not a measure of industry's level of development. Primarily the number of enterprises reflects industry's flexibility. In 1980, Czechoslovak industry had a total of 1591 enterprises. (These included 860 state enterprises, 156 enterprises managed by local authorities, 179 municipal-service enterprises, and 396 industrial cooperatives.) By international comparison, the number of enterprises in Czechoslovakia is declining year by year--primarily in the categories of small and medium enterprises.

The gist of the problem of optimal enterprise size is that the size of an enterprise must be in accord with the objective (technical, natural, economic and social) conditions of production.

Accordingly, enterprises can be classified into three principal categories on the basis of size. The large, medium, and small enterprises differ only in size. World-wide, opinions differ as to whether the dividing line between small and medium enterprises is 100, 200 or 500 employees, and whether the dividing line between large and medium enterprises is 500 or 1000 employees. In the classification of Czechoslovak enterprises by size the lowest limit is 500 blue-collar workers (not including engineers and technicians).

Small enterprises are the type of enterprise that plays a specific role in the economy. The main characteristics of small enterprises are direct and constant contact with customers, flexibility of the production structure, and ability to adapt to the needs. Thus small enterprises are characterized by smaller production runs, by the flexibility of their production, technical, organizational and economic structure, and by suitable location in relation to centers of consumption. But at the same time they differ significantly from one another, as this is clearly reflected in a classification based on the supply of needs. On this basis there can be:

1. Enterprises that supply the population's final (consumer) demand;
2. Enterprises that supply the production needs of large enterprises;
3. Enterprises that supply the needs of scientific and technological development, and the other social needs of social production.

#### Development of Employment at Small Enterprises in Czechoslovakia From 1972 to 1980

Enterprises	Employment in 1980 (1000 workers)	1980/1972 (Percent)
Municipal services	127.0	103.2
Local industry	100.5	38.2
Industrial cooperatives	173.2	103.1
Council enterprises	15.9	101.8
Artisans	16.5	61.3
Jointly	433.1	99.4

One principal reason of the small enterprises' neglect is failure to adequately recognize the mutual interrelations between large-scale industry and the small enterprises. Another reason is a one-sided theory regarding the tertiary sector and services; this has led to an organizational and generally systems break in the relations between large and small enterprises. The development of automobile repairs, for example, depends on the number of cars produced and imported, on their technical state, and on the prices, but not on theoretical concepts regarding the tertiary sector or the definition of services.

In the industrially developed capitalist countries there is a very close relationship between large-scale industry and small enterprises in this respect. In America,

for example, General Electric relies on a network of 400,000 small businesses with which it maintains close cooperational relations. General Motors is cooperating with 28,000 subcontractors. Western economists frequently refer to small businesses as the antennae of large-scale industry. The small businesses market new products, and this permits observation of the market's reaction to the products. Large-scale industries pick and choose among the innovations, and they begin to produce on a large scale the more durable products that are also profitable.

1014

CSO: 2500/251

MONEY TO BE CHanneled FROM FOOD TO CONSUMER GOODS

Prague HOSPODARSKE NOVINY in Czech 9 Apr 82 pp 8-9

[Series of solicited comments from spokesmen of organizations listed in article: "Reflection of the Future Market--Problems in Optimizing the Structure of Public Consumption"]

[Text] HOSPODARSKE NOVINY No 4/1982 published an exchange of opinions entitled "Consumers Should Be Given a Choice." Its participants agreed that the customer finds the market relatively poorly stocked with consumer goods and consequently he spends a substantial part of his income on food products, and among the latter, primarily on meat. The food industry does not offer an adequate amount of highly upgraded raw materials in the form of the demanded products and semifinished products. Plants producing consumer goods show little response to customer demand for fashionable and luxury products. In addition, certain products, primarily from the electrotechnical industry, are available either not at all or in very restricted numbers.

We turned to authorities that control production and commerce and influence the supply and quality of services with the question of how they propose to accommodate the consumers' demands. We reprint excerpts from the answers that we received with the knowledge that they do not reflect a comprehensive view of the problems. Some contributions indicate departmental attitude. We received no response to our letter from personnel of the Federal Ministry of the Electrotechnical Industry, the CSR Ministry of Interior and the SSR Ministry of Industry. Even the comrades in the Slovak Association of Manufacturing Cooperatives could not find time to answer.

SSR Ministry of Commerce

The long-term shortage of selected types of industrial products remains a key problem of the domestic market. This involves shortages in the supply of not only products for essential needs but also, to an ever-increasing extent, fashionable, technically advanced products. As a result the domestic market suffers from a considerable structural imbalance.

To alleviate the shortage of a certain basic group of products on the domestic market, foreign currency resources are used to enrich the available selection. In the course of 1978-1981 the CSR and SSR Ministries of Commerce allocated from their resources foreign-exchange funds for procurement of machinery and equipment; e.g., for production of soap products, skis, ski bindings, instant products. This approach allows concentrating resources in areas of key importance to the domestic market. However, it must be regarded as exceptional, because such utilization of foreign-exchange resources restricts the possible direct importation for consumer goods inventories.

The causes for the product shortages on the domestic market and of the resultant inadequate structure of supplies can be ascribed to the following basic factors:

- insufficient production capacities in industrial sectors producing consumer goods;

- high export quotas for domestic production; exports include a number of products in short supply on the domestic market; in some cases it would be sufficient to curb their exports only by a slight margin in order to satisfy their market demand;

- discontinuation or drastic limitation of production of selected types of products motivated by specialization of production and cooperation within the CEMA framework (sewing machines, two-element gas cookers, cameras, typewriters, exposure meters, etc.);

- liquidation of production facilities without replacement due to emergencies; this caused, for example, shortages of aluminum and nonferrous products, some types of household needs and equipment;

- inadequate adaptation of production to the changing extent and structure of consumer demand.

The shortage of some common types of consumer products is also created because large industrial plants do not have capacities and manpower for their production, and often also smallscale production is rather inefficient for them. Organizations of manufacturing cooperatives and municipal economies that do have the requisite production facilities for some type of products in short supply and have suitable technology as well as qualified manpower, do not manufacture these products due to a shortage of the required budgeted material resources. The situation is similar with associated production in JRD [uniform agricultural cooperatives].

These imbalances in production cause considerable supply problems on the domestic market and dissatisfaction of the populace over the shortage of some types of consumer products that had been produced in adequate quantities at a high technical and qualitative level. For that reason the SSR Ministry of Commerce in cooperation with business and economic units and regional commercial enterprise sponsors annual expositions of shortage products. We are looking for producers, but with minimal results.

To eliminate the shortage of some types of products in the years 1983-1985, the Slovak Association of Manufacturing Cooperatives, the SSR Ministry of the Interior and the SSR Ministry of Agriculture and Food will increase allocations of raw and other materials, semifinished products, investment resources, machinery and equipment. The basic approach to dealing with this problem should be incorporated first into the plan for the development of production sectors for individual years. Annual shortages in market supply that basically involve the same types of products show a lack of foresight and sound concept in dealing with the problem, with increasing reliance on extraordinary forms of coping with shortages--primarily imports or the purchase of released export goods for foreign currency.

Innovation in consumer products is a very important aspect of cooperation and active stimulation of production by commerce. The key point for implementation of innovative processes is production, which must assume a major share of responsibility for correctness of innovative intents and their implementation. Commerce can only perform the function of inspiration that affects innovative processes and supports them as a customer.

To ensure positive implementation of the influence of commerce on production, the CSR and SSR Ministries of Commerce already worked out for the Sixth Five-Year Plan the "Key Directions for Development of Innovation of Industrial and Food Production Consumer Products for the Years 1976-1980." This contained more than 400 topics. All key production ministries were familiarized with the material and passed it on as documentation for production programs to economic production units. However, the results in innovation and substitution of the selection in the years of the Sixth Five-Year Plan are short of the target.

The effects of CSSR Government Resolution No 241/1978 also failed to materialize to any visible extent. It charged the ministerial production departments with substantially accelerating the rate of the innovation process of consumer products and providing deliveries of specific innovative products of key importance to developing the selection of industrial consumer products.

As a follow-up, the CSR and SSR Ministries of Commerce worked out "Key Directions for Innovation of Consumer Products in the Seventh Five-Year Plan." This contained 530 topics, with emphasis on machining and electrotechnical products that are of key importance within the framework of industrial consumer products and whose innovation rate has so far been poor.

The foremost requirements of commercial organizations are oriented, for example, in manufacturing consumer products on innovations for refrigerators and freezers; this should concentrate on increasing their volume, lowering temperature in the refrigeration compartment, automatic defrosting, lowering the consumption of electric energy along with introducing electronic controls, decreasing their noise factor and improving their design. Electric grills should have universal application, their equipment should include timers for presetting, continuous temperature control, self-cleaning enamels, etc.

To expand the selection of kitchen products, it will be necessary to enrich the market by hot-air ovens for baking and microwave ovens for food preparation. There is also a lack of heating systems and water-heating systems using unconventional forms of energy.

Great opportunities for innovation exist with automatic washing machines for devices saving energy, water, detergents and time. In the case of irons and sheet irons there is need for increasing the sensitivity of the thermostat, reducing weight, improving the articulated joint of the cord and improving the surface of the ironing plate.

Shortages exist in consumer electronics. The design of electronic circuits fails to use a higher degree of integration; inadequate use is made of semiconductor elements. In connection with requirements on energy it is imperative to lower consumption, particularly of color TV sets. Three basic types of color TV sets should gradually become available, a luxury and a cheaper type together with a portable set. The assortment of consumer electronics should also provide the market with television games, containing a number of games in one product, and, electronic clocks and watches. Another type insufficiently represented on the market is the electronic calculator (minicalculator). The assortment of tape recorders is also inadequate and their price does not match their technical level.

An important and objective need exists for expanding the supply of small appliances and devices for household kitchens, primarily for mechanical food processing. The level of this selection lags in our country even in comparison with other CEMA countries (GDR, USSR and Poland). The market should not fail to offer, for instance, all-purpose grinders, mixers, electric knives, coffee makers, juice extractors.

Other machined products involve various tools and equipment for handymen and for gardeners, where output must be increased, their functioning improved and made more versatile, and the selection expanded.

Much remains to be done to improve the consumer product supply in textile and clothing products, household textiles, footwear, particularly in their fashion appeal and quality.

These selected groups of products show the extent of possibilities for enriching the supply of industrial consumer products. However, commercial demands for stepped-up innovation of consumer products clash with the extant problems coped with by the production base, whether its technical level, availability of parts, availability of materials. Also, because of limited financial resources and the pressing need for coping with other problems, it is impossible to affect innovation of the selection to any substantial degree by imports. Thus, internal trade must draw on innovated products of domestic manufacture. This results in an imbalanced expansion of product selection in production sectors. The situation can be dealt with by our wider participation in production in the international division of labor, which could also benefit from a wider use of license arrangements and international cooperation in the manufacture of consumer products.

Eng Jozef Strechy, CSc

## CSR Ministry of Commerce

While responsibility for the level of available merchandise for sale accrues exclusively to commerce, availability of merchandise on the domestic market, the extent and level of the available selection result from cooperation between commerce and production. When the customer evaluates the existing supply of consumer goods on the domestic market, he also evaluates the results of cooperation between the two partners.

The current availability of industrial consumer products on our market, in spite of improvements in a number of selections, cannot fully withstand the critical view of the consumer. On the one hand, there are a number of types of merchandise where the supply cannot fully satisfy consumer demand; on the other hand, the supply of a number of types of merchandise, regarding their appearance, technical level, utilitarian properties, etc., does not come up to what could be called consumer quality, which serves as a yardstick by which the buyer rates the product. The reason in the latter case is an inadequate extent of innovations; this creates considerable problems on the domestic market, failure to meet the needs, potential accumulation of unmarketable supplies and, last but not least, orientation of the customer toward food products.

It stands to reason that in facing these facts commerce cannot stand idly by. For that reason, business organizations in procuring supplies also negotiate every year the requirements for innovation and simultaneously evaluate the results in the innovation process in the past period. Business organizations base their requirements on their knowledge of existing and their estimate of future needs and also on the needs that haven't been met.

The CSR and SSR Ministries of Commerce are working out innovation directives for a 5-year period, which they are negotiating with all supply sectors. In addition, specific negotiations are going on in regards to types of innovation, both as to quantities and deadlines for implementation. These negotiations for the Seventh Five-Year Plan involved 458 types of merchandise. An agreement about implementation of the innovation suggestions submitted by commerce is reached in few instances; an agreement is reached on the quantity of some to meet demand; the negotiated deliveries are not always carried out.

A significant role in supplying the domestic market and stimulating greater innovation should also be played by the importation of consumer goods. However, a substantial part of commercial foreign-exchange resources is used primarily for dealing with and alleviating shortages in the availability of some essential merchandise, and only a limited part can be used for the procurement of goods to add variety to the domestic supply. From this also stems the responsibility of manufacturers for supplying the domestic market, for the level of the consumer goods supply, for development and delivery of new, advanced products for the domestic market. That is where the question should be directed as to how they intend to provide for the needs of the domestic market, in what manner they will accelerate the innovation process to the point where supply of consumer goods will correspond to consumer demand.

Eng Ivan Hrdlicka

## Czech Association of Consumer Cooperatives

For consumer cooperatives, construction materials have specific importance among industrial products. We adopted a concept for developing the selection of construction materials until 1985 in order to eliminate shortages on the market and make new products available. In our coordinating efforts we are negotiating requirements for innovation of the selection, for instance, introducing into production new types of burnt masonry and windows with triple insulating panes meeting the requirements of the revised norm CSN 73 0540 regarding improved heat retention properties of structures and buildings.

Extraordinary attention is also devoted to the innovation of ceramic products. Construction of new and the expansion of older plants (RAKO III, Horni Briza, Lucenec) will substantially increase deliveries of ceramic wall tiles. There will be an increase in the share of decorative wall tiles; production of facing strips--e.g., decorative Rakodur and Alit--will also be stepped up.

Nevertheless, despite all efforts, we still will not be able to meet the demand for a number of things. Due to economy measures in the consumption of metals there will be a shortage of steel brackets; due to inadequate capacity there will be a shortage of heavy types of roofing paper (IPA, Bitagit). In these cases priority will be given to supplying material for family house construction; other construction projects will be offered substitute materials.

We experience considerable difficulties in procuring products from small manufacturers (wooden and wicker products, wood-carved souvenirs, etc.). Just in the past 5 years their procurement dropped from Kcs 2.74 million in 1976 to Kcs 1.65 million in 1980. In addition to the diminishing number of manufacturers, the factors at work here are a low procurement price and the system of taxation applied to cottage workers. In an effort to improve the situation we reached an agreement with price control authorities that prices for a number of small products (e.g., kitchen aids, wicker and brushwares) be negotiated by an agreement between supplier and procurer. Then we sought manufacturers through advertising. Many showed interest, but most of them soon canceled their offer.

Any substantial expansion in procuring homemade products is impeded by the following reasons:

--national committees in many cases not issuing licenses for production, even if the applicants meet the required conditions; e.g., from 45 interested parties who applied at the regional committee of the Czech Association of Consumer Cooperatives in Pilsen, 35 were refused a license;

--complicated administrative procedures for licensing; thus, national committees require, for instance, an extract from the crimes register, certification of procurement of raw materials, the manner of transportation, and many other documents;

--complicated tax and notification liability.

Dr Robert Sedlak

## Federal Ministry of Machine Building

Consumer-oriented machining developed a material production base that provided households a high degree of with consumer durables. The production volume in most selections meets the market demand and at the same time accounts for a high export volume (60 percent, bicycles; 50 percent, vacuum cleaners; 50 percent, irons; etc.). The extent of these tasks restricts to a certain extent the possibility for meeting the demand of the domestic market for shortage products, even though their number is lower and is limited primarily to refrigerators, knives, skates and bicycles.

The innovation program propounded by the ministry for the current 5-year plan included 120 selected products (CSR Ministry of Commerce required 60 products) and was approved by business organizations. Commerce demands were refused for dishwashers, dryers, stainless dishes, automatic washers with drying cycles, power saws and chain saws and some additional products that were required in series of 1,000 to 1,500 units annually, for which components are not available either in the CSSR or in CEMA and whose production would adversely affect the economy.

We submitted to commerce an offer for 30 products not previously produced in the CSSR. They include, for instance, combination refrigerators with more than 300-liter capacity, hybrid electric stoves, woodburning stoves, hot-air grills, motor and electric-powered cutter bars, safety locks, single-lever mixing sets, skates made of plastics, motorbikes with automatic transmission, coffeemakers, solar systems, automatic washers with economic programming and hot-water feed. Innovative plans still include products for which components are not available in the CSSR or in CEMA, such as microwave heating devices, ceramic glass boiler panels, electric ranges with electronic programming. We placed these requirements with the electrotechnical industry sector without positive results so far.

In evaluating the results it must be kept in mind that:

--our sector provides almost the entire selection of products for a 15-million market, whereby importation of consumer goods is negligible in comparison to other countries (e.g., the GDR produces only 50 percent of the assortment); that negatively affects the economic aspect of production;

--cooperation, specialization of production, to include scientific and technical cooperation in CEMA countries, is not at a level corresponding to foreign trade in this area;

--unsolved problems remain in providing a parts and materials base in the framework of CEMA countries;

--research into the needs and demands of the market is also at a low level; it should include coordination of activities and requirements of foreign trade enterprises with domestic market organizations.

Eng Ivan Kasan, CSc

## CSR Ministry of Industry

The growing demands of consumers were reflected in an increased demand for products of high quality and functional perfection; i.e., luxury and stylish goods. This share will therefore increase to 20.1 percent. For that reason we are preparing together with the national ministries of commerce deliveries of exclusive products to selected outlets of Luxus. They will sell all products produced in the CSSR for exports. Textiles and clothing will include knitted outer wear of perfect workmanship, ladies' and men's terry-cloth bathrobes with a dense high-sparl look and corduroy products. Household textiles will primarily be conventional double-pile carpets and plush furniture textiles. Other offerings will include selected types of furniture, glass, porcelain, fancy leather goods and sports equipment.

The focus of our innovation plans is qualitative improvement of products made of synthetic fibers. We want them to present the appearance and properties of natural fibers but also provide easier maintenance (resistance to wrinkles and soil, etc.).

We endeavor to balance demand and supply of goods on the market. However, we do not always succeed. The factors affecting production are increases in the price of raw materials and fuels and obsolete technical equipment; on the part of commerce problems relate to operational distribution of goods, inadequate storage facilities and the system for selection of assortments. In judging the level of deliveries, consideration must also be given to the fact that a considerable part of production is destined for exports.

Eng Karel Voldrich

## SSR Ministry of Agriculture and Food

Production of semifinished products and prepared meals in Slovakia increased by more than 33 percent during the Sixth Five-Year Plan; there was also a substantial increase in their selection. Current production includes approximately 50 types of prepared meals in .5-or 1-kg packaging (e.g., various meats with side dishes), 15 types of homogenized powdered mixes (pancakes, ice-cream mixtures, potato pancakes, etc.), more than 20 types of soup preparations and sterilized soups, frozen vegetables and diced potatoes, fine pastry and confectionery products. Production capacity in the specified categories surpasses the demand by business organizations. The situation is similar in production of sterilized and frozen prepared meals in mass packaging, which we no longer produce due to insufficient sales.

In connection with the measures regarding retail prices for some food products, there appears to be a need for products that can be prepared in the kitchen and are comparable to meat courses. With interchangeable nutritional value, this involves, for instance, milk, dairy products, vegetable and fruit products.

In 1979 to 1980, we worked out specific documentation regarding intents for the Seventh Five-Year Plan. The objective was gradual structural change in products in favor of foodstuffs with a high biological and nutritional value, dietetic

and diabetic products, foods for individual categories of the populace, nutrition for children and babies, semifinished products, prepared meals. The goal was to provide effective nutrition and more innovative products.

In the altered, specific innovation plans for the individual years of the 5-year plan, problems come to the fore on comprehensive utilization and improved processing of raw materials, substitution of imported raw materials by domestic, lowering sugar consumption in production, saving energy. In addition to the overall volume of innovated products we also specify the thematical orientation of innovation for individual VHJ [economic production units].

The planned volume of new products for 1981 amounted to Kcs 342 million. The newly introduced total of 141 new types of products amounted to Kcs 466 million. Among the developed and introduced products, the majority of the new advanced products of a higher innovative order became popular with consumers. These include Marka, the nonalcoholic beverage with red currant flavor; prepared meals in aluminum containers; powdered whipping cream; Milko, a renneted milk dessert; Spartak skinless, vacuum-packed frankfurters; acidophilous milk; Ciferian stuffed chickens; stuffed cabbage; ground poppy-seed and apple turnovers.

Expanded production of dairy, fruit and vegetable products with their biological and nutritional value will meet the increasing demands of consumers and will at the same time create the prerequisites for lower consumption of meat and meat products. We envision that in the Seventh Five-Year Plan there will be an increase in, for instance, production of natural cheeses by approximately 8,000 tons (by approximately 50 percent), namely by construction of new capacities or their expansion in Senica, Nove Mesto nad Vahom and in Levice. The assortment of blue cheeses of the Hermelin type will also be expanded.

With vegetable-based products, their selection will be gradually expanded by semifinished products suitable for preparation of vegetable hamburger patties. There will be increased production of frozen vegetables, such as cauliflower, green beans, green peas, kohlrabi, etc.

It will be necessary for commerce, with our cooperation, to work out, on the basis of market research, specific proposals for innovative products for which there is, or will be, interest among consumers. We shall turn over in such a manner updated requirements to our developmental sector for implementation this year or next.

Eng Anton Suchanek

#### CSR Ministry of Agriculture and Food

We regard a market adequately supplied with quality foods to be a significant politicoeconomical factor, which to a considerable degree is an indicator of satisfaction and also of work motivation of the populace in general. Thus, the focus of measures is oriented on agricultural and food production. The long-term program for implementation of the party's agricultural policy is the Implementation Program of the CSR Ministry of Agriculture and Food toward Carrying out the Resolutions of the 16th CPCZ Congress under Conditions of the Agricultural/Food Complex.

Specific tasks, forms and methods for implementation of the state plan for the year 1982 in agriculture and in the food industry, sectorial economy, provision of materials and technology, and scientific and technical development, to include the area of cadres and public welfare are reflected in their entirety in the Implementation Measures of the CSR Ministry of Agriculture and Food toward meeting the state implementation plan and the budget for the year 1982 and for application of the improved system of planned management in agriculture.

Eng Zdenek Safarik,  
Josef Jokl

#### SSR Ministry of Interior

Organizations providing local production and services, which are controlled by the SSR Ministry of Interior, supplement the domestic market primarily with stylish and luxury products and services to add to the selection of products. Local production and service enterprises supplied the domestic trade network in 1981 with products amounting to more than Kcs 1.7 billion in retail prices, which represents an increase of more than Kcs 50 million (3 percent growth) as compared to the previous year.

However, enterprises could produce much more to contribute to the consumer goods inventory, under the prerequisite of limiting the so-called other production that is primarily oriented toward meeting the needs of centrally managed industry. This production enables the local economy enterprises to achieve a high labor productivity and profitability, smooth marketing and supplies of materials. However, most of this production should be provided by the centrally managed industry in its own plants. Yet, discontinuation of this production in our plants is lagging. On the one hand, organizations of centrally managed industry are unwilling to take over this production because of capacity reasons, actually calling for its increase; on the other hand, this profitable production covers losses incurred by local economy enterprises through performance of unprofitable services.

However, increasing the profitability of services by charging higher prices could also result in lower demand and, consequently, a lower absolute volume of tapped buying power. This can be seen already in the auto repair industry, which experiences insufficient demand because of higher prices of fuels.

The current consumer demand places new and higher requirements on the structure of product inventories from the viewpoint of stylishness, quality and utility of products. Economic stimuli of the Set of Measures (preferential pricing or penal price reduction) are not yet reflected in motivation. Not even stagnation in the marketing of furniture forced enterprises to step up their innovation efforts.

Implementation of innovation programs is also adversely affected by problems persisting in material and technical supplies and unsolved even by the decree of the State Planning Commission and CSSR State Arbitration No 48/1980 regarding material balancing and negotiation of supply and demand relations in the planning process. Balanced coverage itself is inadequate and supplies then dwindle even

more in the case of such materials as wool, cotton and wood. The structure of the available selection, stylishness of design and quality of these materials do not meet the requirements for quality and stylish products.

Measures are being adopted in the current period for more effective management and a more flexible development of reimbursable services. Measures in planning sphere are to provide permanent orientation of organizations toward performance of work and services for the populace. Adaptations in methodology are already designed to provide during preparation of plan and budget proposals for promoting the development of services and to reduce the administrative burden. The incentive system in organizations is to be tied to an index of reduced services for the populace. Councils of Regional National Committees and of the National Committee of the Capital of the SSR Bratislava are to be authorized to undertake in the course of the year adaptations in the ratio of wages to reduced performance in cases when the volume of services will be higher than called for by the tasks specified by SSR government.

Adaptations are also to be applied to credit policy in order to provide better stimulation for development of services. The wage policy is to make use of simple but stimulative wage forms, such as profit sharing, combined wages for performance and quality, personal evaluation and chozrascet [cost accounting system]-type bonuses and rewards. Adaptations are to be made in work, legal and wage regulations to facilitate flexible utilization of mobile manpower for seasonal and short-term employment relations in services. To add resilience to the pricing policy, it is proposed to adjust the existing price level for repairs, services and custom manufacture in such a manner as to provide for the organizations essentially the same measure of profitability as products do.

A fund for repairs and modernization is to be established to reinforce the material and technological base of services. The operating system of coordinating organizations is to be intensified in the area of providing services; the regulation governing supplies of replacement parts is to be changed so that the obligatory agreed-upon volume and selection is based on objective needs of service performance and not on parameters specified by producers or suppliers. Other measures are ready for cadre training, development of supplementary services, the accounting system and administration as well as other areas. All this creates the prerequisites for continued development of services and local production.

Eng Pavel Sykora

#### Czech Association of Manufacturing Cooperatives

Manufacturing cooperatives, in addition to providing the most varied services, also produce consumer goods. Just in the past year the CSSR manufacturing cooperatives supplied the domestic market with goods produced in small series, which means enriching the selection, particularly of those goods promoting better apparel and improved household amenities.

The assortment of production covers a wide spectrum. Manufacturing cooperatives produce 25,000 various types of products in 120 categories. They flexibly react to changes in consumer demand.

Thus, in apparel the quarterly supply offers approximately 800 designs, 600 of them new or modified. The annual turnover in knitted goods includes roughly 1,000 designs, in leatherworking some 900 designs. In industrial goods, where introduction of new products calls for long-term development and verification, changes in production are technically more demanding. In 1981 the cooperatives introduced on the market almost 120 new products from the fields of machining and chemistry.

In electric lighting fittings the cooperatives submitted more than 30 percent of new types, in chemical and plastics production 40 new products. They expanded the production and deliveries of demanded goods for the selection of household chemistry, cosmetics, car cleaners, preparations for agrochemistry, construction, toys and household utensils made of plastics. In the assortment of wooden furniture the cooperatives enriched the domestic market with 122 new types of furniture sets and household accessories.

Included among the most interesting products are wood-burning stoves (Kovodruzstvo Plzen), spoilers for Skoda 105 and 120 cars (VD [Manufacturing Cooperative] Plzenske dilo Plzen), petty cash boxes and woodworking machinery for hobbyists (Drukocel Rosice).

An incentive for innovation efforts of manufacturing cooperatives is provided by the annual competition for the Perfect Cooperative Product. From the 850 submitted products the committees of specialists last year presented 250 prizes. However, a condition for payment of financial award to the manufacturer is proof, certified by customers, that the merchandise is actually being supplied for the domestic or export market.

Eng Evzen Parma

Cedok [Czechoslovak Travel Bureau]

In our foreign excursions we annually offer approximately 350,000 bookings. The focal point is tour offers to socialist countries. The most popular tours follow the sun and the sea.

In spite of price increases, which every year accompany offers made by our partners from abroad, in 1982 Cedok did not fully project this increase into its sale prices. Particularly with tours to socialist countries, the trust management endeavored to maintain prices at last season's level; there was only a moderate increase for tours to Hungary and the GDR. On the other hand, there were substantial reductions in prices for preseason and postseason tours. Nevertheless, as of end of March a considerable number of bookings are still available: 38,000 to the USSR, 32,000 to the GDR, 19,000 to Hungary, 12,000 to Yugoslavia, 10,000 to Bulgaria, the same number to Romania, 1,000 for sea voyages, approximately 800 to nonsocialist countries and 330 to Cuba.

This situation in the sales of tours abroad indicates a certain ebbing of public interest, caused primarily by steep increases in the prices for hotel services abroad and for transportation over the past several years. This increases the sales prices for tours to a level at the limit of our citizens' resources or

leads them to comparisons with prices for other types of goods of a more lasting value; e.g., washing machines and color TV sets. For that reason, this year we lowered the prices of selected tourist excursions to the USSR with a departure date prior to 30 September 1982 by 30 percent and those with a departure date between 1 October and the end of the year by 50 percent. The prices for excursions and accommodations in Transcaucasia and Baku were lowered by 20 percent.

While tourists from a number of nonsocialist countries--e.g., West Germany, Sweden, France--avail themselves of sojourns at sea outside the tourist season (May-June, September-October), our public makes little use of this offer in spite of its advantages (comfortable weather, fewer guests and, consequently, better quality services and lower prices).

Further expansion of offers for foreign travel would not be realistic in view of the low public interest. Consideration must also be given to the limited availability of foreign currency for tours to nonsocialist countries. The charted course will take the form of improving the quality of offerings through innovation and quality services.

Cedok offers in domestic travel are multifaceted. Interested parties can choose, for example, cultural excursions, skiing, recreation tours, tours combined with foreign language instruction. The expected transfer of interest from foreign to domestic tourism is not very pronounced so far.

Even though we have a lot to offer in domestic tourism, services must be upgraded. The customer also compares. The cost of accommodations is acceptable; nevertheless a certain shift from hotels in the higher category to the so-called light accommodation facilities (camps, chalets) can be expected.

Dr Vaclav Salmon

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CSO: 2400/215

## PRODUCTION TRENDS OF FEDERAL MINISTRY OF GENERAL ENGINEERING OUTLINED

Prague JEMNA MECHANIKA A OPTIKA in Czech No 2 1982 pp 29-31

["Long-Term Program for the Development of Czechoslovak Engineering" (Part V)]

[Text] In previous articles we considered the most promising and desirable directions for development in the structure of both the electrical industry and heavy engineering. The last thing to discuss is the Plan Group No 215, consisting of industrial areas that administratively belong under the federal ministry of general engineering. In terms of volume, it is the largest of all industrial sectors, fulfilling very important tasks in the national economy, since its share of the total production of Czechoslovak engineering is 54 percent, its share of exports to socialist countries is 48 percent, of exports to nonsocialist countries is 67 percent, of supplies for domestic investment development is 45 percent and of supply of engineering consumer goods to the consumer goods inventory is 75 percent. Thus it is clear that the general engineering production volume utilized concentrates on consumer goods inventories and exports to nonsocialist countries.

Therefore, we have high demands on the quality and technical standards of general engineering products, since every drop in these two indicators is reflected by problems with sales on world markets or on domestic markets and slow growth of the engineering consumer goods share in terms of retail trade. Unfortunately, the lower technical and economical standards have not yet resulted in problems in marketing, only in the internal investment development and the entire area of engineering. For Czechoslovak engineering, this "market" is still relatively unsaturated and soft. Also, general engineering has not fulfilled some intentions of the Sixth Five-Year Plan, particularly with exports. Apart from the technical, economical standards of a number of general engineering products, which lag behind, another reason for the slow pace of exports is the slow shift toward areas and products most required by international trade.

While in the world market the highest demands continue to be for such general engineering products as service and household machines and equipment, heavy-current and light-current engineering products and apparatus, complementary products, auto accessories, machine tools and forming machines, during the last 10 years these areas of production have not increased their share in the general engineering production at all. On the other hand, products either intended mostly for the domestic market or scarcely demanded on the capitalist market

have increased their share. The only production areas where the development of the general engineering structure "fits" in the world marketing situation is the relatively strong increase in the proportion of machines and equipment for the light and food industries relative to the total production of general engineering. During the last 10 years, general engineering has been developing simply, without significantly different rates for individual areas. Four-fifths of the entire general engineering sector structures showed only about a 7 percent increase annually. This situation was caused also by the fact that the proportion of exports of the total engineering sales has almost not expanded at all. On the contrary, the volume of exports to nonsocialist countries, which indicates the changes in the world demand for machines most reliably, dropped slightly during the past 10 years.

Further, this nonprogressive structure was petrified to a certain extent by the structure of the so-called supporting development programs. The structure, on the one hand, developed extensive programs for manufacturers of automobiles, trucks, agricultural machines and tractors and, on the other hand, supported only development in certain selected machine tools, textile and leather machines and, recently, hydraulic machines. This is not to say that there is a surplus of trucks, automobiles or agricultural machinery, but the quantitative development of the supporting development program did not significantly advance exports, did not increase progressively the technical standard of products.

The effects of the labor productivity growth and cost reduction cannot be defined; in other words, the total production effectiveness did not increase substantially. Textile machines are a typical example in this respect. In some areas of the textile machine production we once reached the top of the world technology without a supporting development program; in the next 10 years, operating according to the supporting development program, we lost that position as well as world markets. The structure of the supporting development program, dealing almost exclusively with final products and paying almost no attention to equivalent development in complementary products, led to a progressively deeper disproportion between final production and complementary products. We are mentioning this at the beginning of this article, since we should learn from it while forming a well-designed production program for general engineering and thus avoid possible mistakes.

As far as prospects are concerned, one basic requirement applies to general engineering as well as to the entire area of engineering: to eliminate one of the main causes of insufficient technical economical standards--final products insufficiently equipped with automation based on microelectronics, automated control systems, hydraulic and pneumatic elements, drives and materials, which still do not have required technical standards and quality and are not available in all types required. This, in fact, is one of the main reasons why the development in technical standards has been relatively retarded even in areas of production comparable with top world products, such as textile machines, machine tools, tractors and trucks.

Similarly as in the entire engineering area, another general condition for development is necessary here: concentrated and specialized manufacture of nodes and components, which so far has not affected either the structure or the pace of production development in general engineering's complementary areas.

The present standard of this intensification factor lags far behind advanced engineering elsewhere in the world, even in the area of general engineering.

Finally, there is a third general condition, and this again applies to the entire area of engineering: broad, intensive participation in the international division of labor and permanently active use of proexport and prointegration decisions.

If we begin to think of suitable structures for individual areas of general engineering, we must think primarily of such areas or groups of areas that, as the saying goes, "make the weather." These are primarily the following groups of areas:

Share in Present Production of the  
Federal Ministry of General Engineering

Automobile industry	31 percent
Engineering manufacturing technology	8 percent
Agricultural machines and equipment	7 percent
Machines for various industrial branches (textile, leather, polygraphic, wood machining)	5 percent
Services and household machines	4 percent

These groups of areas represent 55 percent of production. Since general engineering production represents about 75 percent of the entire Plan Group No 215, they can be regarded as important representatives of overall production.

Clearly, the automobile industry is the most important. Of all production, truck production is one-half, automobile production is one-quarter, car accessories production is one-seventh. The production of trailers, semitrailers, buses, motorcycles and fire engine trucks constitute the rest.

The automobile industry production experiences considerable difficulties primarily regarding the manufacture of trucks. Supplies of forged pieces, castings and pressed pieces are unbalanced and there is another disproportion between the planned rate of final production and a wide area of complementary subsupplies. It is not only a question of complementary products of the engineering character but also of products from other branches of the national economy. There is a shortage of rubber, fiber, wood and plastic products, coating materials, glass, artificial leather, asbestos, etc.

In terms of material consumption, truck production occupies a leading position in overall general engineering. According to technological and economic evaluations, the production in this area has a medium standard; we have not reached top world standards. The price per 1 kilogram of exported truck ranges from 60 to 70 percent of competitive world prices per 1 kilogram. Czechoslovak export truck prices per kilogram stagnate even in this area. One of the primary reasons is a low standard of complementary products as well as short service life and low operational reliability of main truck aggregates. This applies primarily to engines. Understandably, high costs are also enhanced by insufficient production specialization and concentration.

This fact is rather serious, since truck development shows a growth of various types of cooperation relations, concentration of resources in research and development and thus a minimization of costs. Uniformity in the manufacture of spare parts, aggregates and apparatus is very important in this respect. However, Czechoslovak truck production independently manufactures three basic types of entirely unrelated vehicles. Thus, possible good results of concentrated manufacture, increased technological standards and lowered material costs are lost.

In next 15 to 20 years, we can expect truck development to focus on engine design facilitating fuel conservation, increased service life of individual aggregates as well as the entire vehicle and improved driving safety and operational reliability of the vehicles. In terms of production, certain stagnation or merely slow growth can be expected. Truck manufacturers may put their efforts in concentrated research and development and into production of modern technological equipment and new materials.

For the future, Czechoslovak automobile industry can still expect good sales of TATRA cross-country trucks with air-cooled engines, which occupy, and it seems will continue to occupy, a dominant position in socialist country markets, especially in the Soviet Union.

More extensive penetration into the markets in nonsocialist countries will depend on improved technical standards, service life and reliability of our vehicles and on ensuring perfect operation of services and sufficient supply of spare parts.

As for the manufacture of Liaz-Skoda trucks, production will aim at satisfying primarily the needs of the domestic market. With respect to the existing considerable competition on capitalist markets and growing competition on socialist markets, more extensive penetration into foreign markets will depend on our ability to ensure technical economic standards comparable with world standards.

The manufacture of 1.5- and 3-ton Avia-Saviem trucks with light structure and low fuel consumption has good sales prospects. However, small series and insufficient manufacturing specialization result in relatively high production costs.

The situation in automobile production is far more complex. Similarly to truck production, car production suffers from problems with material and industrial capacities, the unbalance between the final production and complementary product areas, and the shortage of spare parts. Low technical standards and insufficient product innovation in particular create sales problems on foreign markets.

Sales have come to a standstill even on the domestic market. All this together with the entire world situation in automobile marketing creates considerable uncertainty in conceptualizing further development in Czechoslovak automobile production.

The innovation cycle, which is incomparably longer for Czechoslovak cars than for competitive foreign cars, establishes a fundamental problem. While

world-eminent automobile manufacturers perform fundamental design innovation every 6 to 7 years and modernize yearly or every 2 years at most, Czechoslovak manufacture cannot match this pace; the situation is worsening.

World development will be directed at technical, economic improvement of vehicles, particularly a radical reduction of fuel consumption, longer service life and increased reliability of vehicles, improved passive and active driving safety, and reduced air pollution and noise. These efforts will be expressed in increasingly more strict state regulations and norms in individual countries. Methods will be sought to substitute traditional fuels. In order to accomplish these technically demanding tasks, research, development and manufacturing capacities will be integrated. Only those manufacturers with sufficient financial and material resources to deal with these tasks successfully or with access to the results of world science and technology, can withstand competition.

A question arises as to what extent Skoda vehicles will be able to keep pace with world standards. With respect to expected trends in design and car production, it will be necessary to reevaluate substantially the development of automobiles in Czechoslovakia. The Czechoslovak economic power alone is not strong enough for quantitative and especially qualitative development. One of the serious problems is to maintain the standard of automobile technical design comparable with world standards in a broad sense; i.e., including perfectly operating service and innovation on both lower and higher levels.

Automobile producers in other socialist countries will find themselves in a similar situation after their licence rights expire. This situation will most likely favor unifying scientific research and development capacities of automobile manufacturers in socialist countries, primarily in the USSR, Poland, Romania and Hungary (accessories) and perhaps East Germany. This unification can be a basis for wide specialization in the area of aggregates, nodes and spare parts in order to guarantee the highest technical standards and discipline in supplies, which are absolutely necessary. This does not mean uniformity in automobile types, but it assumes the existence of specialized producers of various complementary products, which would compete with world manufacturers in such important areas as ignition, carburetors, brakes, control board instruments, locks, joints, piston groups, alternators, starters, heating, etc. This system should create better conditions also for small producers such as Czechoslovakia, Poland and Romania, both in terms of technical standards and production costs, so that they can compete with other manufacturers.

As with other areas of the automobile industry, maximum development of auto accessories production is undoubtedly clear. In this area, production should increase 7 to 10 percent annually, provided there is broad international division of labor, of course.

With regard to the necessity to reduce the range of products, we should try to agree on cooperative manufacture of fire engine vehicles, and possibly even motorcycles, with some other socialist country. Another possibility with motorcycles is to develop good four-stroke-engine sport motorcycles, primarily for export. In this case, however, it is necessary to consider the enormous competition with other manufacturers on the world market, especially the Japanese.

The situation in another large, fundamental area of general engineering--i.e., production of tractors and agricultural machines--is similarly complex, despite the broad international division of labor existing in this area. Over 600 types of agricultural machines have been distributed among socialist manufacturers in individual countries. Czechoslovak engineering participates significantly in manufacturing machines for planting and harvesting sugar beet and hop combine harvesters. On the other hand, the division of labor and manufacturing specialization have not yet been introduced in the area of animal production machines such as milking machines, conveyer belts for manure removal and drinking devices for animals. As pointed out, the situation is more complicated in the manufacture of tractors. As Comrade Strougal said in his speech at the CPCZ Central Committee 18th Plenary Session, it will be necessary to revise the present concept of development in the tractor production. One of the causes is certainly also high capital and material intensity in expected development in tractor production as well as obviously doubtful effects from exporting to nonsocialist countries.

Czechoslovak tractor production will have problems keeping pace with world production primarily in progressively modernizing them according to continuously increased requirements for operational safety and reliability, reduced air pollution and fuel consumption, etc. When our tractors were introduced in the world market, not even the eminent manufacturers could boast such uniformly designed series of tractors, which brought considerable profit and advantages for both manufacturers and users. Similarly as with truck and automobile production, technical standards of tractors are insufficient due to imperfect complementary products and accessories. Modernized manufacture of the UR III tractor series and the UR II series could create conditions for increased export effectiveness with the assumption of consistently resolved manufacture technology and thus reduced production costs.

Whereas in the future domestic production will focus on higher performance of 90 to 160 Hp categories of traditional designs and powerful road tractors (in dependence on progressive concentration of land cultivated by a production unit), the interests of the foreign capitalist market will focus on universal wheel tractors of 50 to 100 Hp as a result of different production relations. Increased technical standards, safety and hygiene, better systems of driving, gear shifting and control and also a esthetic design are necessary prerequisites.

From the point of view of technical standards and sales needs, the situation in other fundamental areas of general engineering production is simpler. This applies primarily to machine tools, textile, leather and construction machines. These areas show results higher than average. The ratio between wholesale prices and export prices for trade with socialist countries is 1:2 for machine tools and forming machines, their share of the export to socialist countries is significant--almost one-fourth. A similar situation exists in the relations with capitalist countries, only the difference between wholesale prices and foreign trade prices is less. At the same time, these areas participate nicely in foreign exchange, since the light industry machine exports constitute four-fifths of total production, construction machine exports are one-half of total production, and engineering production technology exports are two-fifths of total production. Even other indicators for these machines are good, such as the kilogram price, specific consumption of both ferrous and nonferrous metals, and even energy consumption.

Therefore, we should endeavor to increase the production and export rates of these machines well above average; this applies to machine tools, forming machines and tools, carts, robots, textile machines, leather and shoe-making machines, polygraphic and construction machines. If we expect the production rate of overall general engineering to be 5 to 6 percent annually, then the production rate for these machines and equipment should be more than 7 to 8 percent between years. The export rates for these machines should also be above average, and the nonsocialist country export rates should be higher than those for socialist countries.

In this way, the basic intention could be fulfilled even in general engineering, i.e., to facilitate significantly increased, more effective exports; to participate in international division of labor more extensively; and to create prerequisites for substantial reduction of specific consumption of metals and energy.

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CSO: 2400/209

# NYERS SUMMARIZES ECONOMIC CONFERENCE RESULTS

Budapest FIGYELO in Hungarian 19 May 82 pp 1, 4

[Report by Gyorgy Varga on the 21st Congress of Economists, held in Balatonfured on 10-11 May 1982: "Growth a Function of Equilibrium and Effectiveness"]

[Text] The 21st Congress of Economists was held in Balatonfured on 10 and 11 May 1982, at the SZOT [National Council of Trade Unions] training center. It was sponsored jointly by the Hungarian Economics Society, the MTESZ [Federation of Technical and Scientific Associations] Scientific Society for Organization and Management, the TIT [Society for the Propagation of Scientific Knowledge] Economics Committee, and their respective Veszprem Megye organizations. The congress was called to order by Bela Csikos-Nagy, chairman of MKT [Hungarian Economics Society], after which Janos Pap, first secretary of the MSZMP Veszprem Megye Committee, welcomed the conferees.

The keynote report at the plenary session of this year's congress of economists, entitled "The New Growth Path and the Alternatives for Economic Policy", was by Ferenc Havasi, secretary of the MSZMP Central Committee and a member of the Politburo.

After the opening plenary session, the congress continued its deliberations in four sections. There were a main report and several contributing reports on the topic of each section. In the section devoted to planning, the main report was by Janos Hoos ("The New Growth Path and the Tasks and Dilemmas in Developing National Economic Planning"). The contributing reports were by Andrea Deak ("The Experience and Dilemmas of the Enterprises' Medium-Range Planning Under the New Conditions of Development"), Janos Illes ("The Living Standard and the New Growth Path") and Lajos Gubcsi ("The Effects of the Balance of Payments and Balance of Trade on the Rate of Economic Growth"). In Section 2, devoted to economic regulation, the main report was by Attila Madarasi ("Short-Term and Long-Term Directions of Perfecting the System of Economic Regulation"). The contributing reports were by Albert Racz ("Perfecting the Regulation of Wages and Earning, and the Incentives for Managers") and Laszlo Racz ("Two Years of Experience With the Functioning of Our Price System").

Section 3 considered the international interrelations of the new growth path. The main report was by Jozsef Bognar ("The New Growth Path and the International Division of Labor"). The contributing reports were by Ferenc Bartha ("Our Economic Development and Development of Cooperation Among the Socialist Countries"), Tibor Melega ("New Directions of International Cooperation With the Developed Capitalist Countries and the Developing Countries"), and Gyula Soos ("The State and Problems of International Cooperation, Illustrated on the Example of an Enterprise"). The

topic of Section 4 was economic organization. The main report was by Istvan Hetenyi ("The Economy's Organization and Its Perfection in the Present Stage of Development"). The contributing reports were by Jozsef Kaplar ("Marketing-Oriented Economic Activity and Organizational System") and Zoltan Juhar ("The Enterprises' Market Orientation").

There were 48 contributors to the debates within the sections. At the closing plenary session of the 21st Congress of Economists, Rezso Nyers reported on the debates within the sections and summed up the experience and lessons of the two-day congress.

#### Between the Old Path and the New One

In his summation Rezso Nyers said that, in terms of objectives, there was no basic difference between the new growth stage and the stage through the end of 1978, because the restoration of economic equilibrium and the improvement of effectiveness had already been in the forefront of the tasks in economic policy. But earlier there had been also other levers and sources of economic growth. In the present stage of development, growth became a function of equilibrium and effectiveness.

In the opinion of some, the Hungarian economy has already left its old growth path, but as yet we have not really started on the new growth path: we are in a transitional stage that can be shortened by accelerating the establishment of conditions for the changeover to the new path.

The new growth path likewise will not be free of contradictions; but it must be admitted that their nature, and also their mode of treatment, will be different than in the previous stage of economic development. In the past the contradictions often did not surface at all or were brought to the surface only with considerable delay. Consequently, it was possible to solve the contradictions only with long delay. A characteristic feature of the new growth path is that the contradictions and conflicts will be more open, and reaction to them can be faster; it will be possible to solve them in due time, by democratic means. The debate at the congress confirmed the statement in Ferenc Havasi's report that an important task was to preserve and enhance society's sense of well-being, by developing democracy, by improving relations between the organs of state power and the citizens and, last but not least, by perfecting in a complex manner the system for managing the economy.

It is very unlikely that we can revert to the dynamic growth rate of the early 1970s. As Ferenc Havasi established, the lower growth rate is a consequence rather than a matter of willing it. For rapid growth we lack also dynamically expanding foreign markets, and there is a paucity of social capital. Moreover, the production structure and effectiveness are unsuitable, and the capital- and import-intensity of production are greater than what would be desirable.

The principal task in the changeover to the new growth path is specifically the establishment of the conditions that will make possible the modernization of the production structure, and the improvement of economic effectiveness and competitiveness. We cannot afford to reconcile ourselves to the present slow rate of change. We must accelerate the creation of the conditions that will compel renewal. This cannot be accomplished with partial measures and partial solutions. The congress confirmed the view that more-dynamic growth can be enhanced only in a complex manner, through changes affecting all factors of the economy. However, the congress failed to outline the alternatives in economic development and the related actions.

## Change of Style in Planning

Within the section devoted to planning, the consensus was that economic growth must be based on effective demand. This will require changes also in the style of planning.

The strengthening of the open nature of planning already represents progress. But at the same time we cannot abandon the principle that the national economic plan must determine the principal directions of action and the desirable pattern of economic behavior. There was also agreement on supplementing the national economic plan with a two- to three-year outlook. But this can be no substitute for comprehensive medium-range national economic planning.

Several speakers complained that, in the course of the changeover to the new growth path, not enough attention was being devoted in planning to services for producers and consumers, whereas economic development was objectively strengthening the role of the service sector.

Few experts from enterprises contributed to the debate in this section. In general they complained that they were not getting sufficient assistance in planning. They objected particularly to the absence of forecasts of the macroeconomic processes. They are briefed late--in October or November--on the annual changes in the economic regulators. In practice this means that the enterprises are able to adjust to the modified regulators only around the middle of the new year at the earliest. Therefore the enterprise experts proposed that the enterprises be briefed around the middle of the current year on the foreseeable modification of the regulators for the following year.

It was pointed out that the present international economic conditions and the necessity of adjusting to them often compelled the management of the economy to take short-term actions. Although this has also unfavorable side-effects, for the time being we must live with the short-term methods of managing the economy.

In the section devoted to economic regulation, the contributors to the debate concurred with the present nature of regulation, but they strongly criticized certain specific regulators. They established that regulation was too detailed and too many regulators applied to partial processes, and therefore we were living in a state of over-regulation.

## Prices, Wages, Earnings

The contributors to the debate concurred with the principles of the price system introduced in 1980. In their opinion, the methods of pricing raw materials and basic materials were essentially suitable and could be applied also long-term. The speakers criticized the so-called competitive price system employed in manufacturing, but this system can hardly be replaced at present. Amidst the present conditions of limited competition, this price system plays an important role in anti-inflationary policy, and it also provides incentives to cut costs and raise export prices. However, the price system also plays a retarding role, and therefore in the future mechanism we must make progress also in this area.

A price system applicable to agriculture has not been developed as yet. Within the section it was pointed out that the competitive price system could hardly be employed in agriculture. First, because consumer-price policy does not permit the kind of market-price movements that the competitive price system demands. Secondly, because the objective in agriculture is self-sufficiency; i.e., we are producing domestically products that are produced at less cost abroad. Consequently, the competitive price system cannot be reconciled with this agricultural policy. It was pointed out within the section that costs were especially high in some branches of agriculture, and that we were producing expensively by international comparison.

Among the economic regulators, the most criticism was directed at the regulation of wages and earnings. Since the regulation of earnings must simultaneously serve many objectives, it is a brake rather than an incentive. The system of regulating wages and earnings will be modified as of 1983, and it can be expected that the strongly criticized base approach and pressure for growth will be relaxed.

The system of wage regulation employed in agriculture is not sufficiently adaptable to the natural conditions, nor to a change of the production structure that is warranted also in agriculture. Wage regulation's average-oriented role is too strong. Therefore the contributors to the debate felt that new and more effective methods had to be sought for the regulation of earnings in agriculture.

The present system of enterprise reserve funds is unsuitable. The reserve funds are dismembered, and the rules for the use of various reserves are set centrally in a complicated manner and periodically revised. The section recommended complete revision of the system of depreciation in industry, specifically in conjunction with technical development, accelerated depreciation, and the centralization of depreciation. Investigation of the feasibility of levying a value-added tax also was considered timely.

In conjunction with economic regulation it was pointed out that compromises and half-solutions also could help and represented progress, but they should not be regarded as ideal.

#### Foreign-Market Limits of Growth

Within the section investigating the international interrelations of the new growth path, the consensus was that the high material and energy prices were here to stay, and therefore the Hungarian economy's production and cost structures had to be adjusted accordingly. The possibilities of obtaining foreign loans could be expected to become more difficult, and especially the interest rates would rise. It was emphasized that ties with the CEMA countries would retain their decisive role in the system of Hungary's external economic relations. These ties would continue to play a stabilizing role in the Hungarian economy, although to a lesser extent than in the past. All this did not mean that we should not explore new possibilities for cooperation. For example, it would be mutually advantageous to develop cooperation in the supply of subassemblies and production parts. In agreement with Ferenc Havsdi's report, the section adopted a standpoint in favor of improving our position also within CEMA, through better and more-demanding marketing and economic work.

Improvement of the balance of our dollar-denominated foreign trade is a great accomplishment of the economic policy pursued since 1979. As Ferenc Havsi pointed out, it is a result of the past three years that we have been able to ward off, or at least significantly dampen, the unfavorable effects of external factors that could not be

foreseen. Such factors are, for example, the crisis in Poland, the discriminatory measures of the capitalist countries, the growing protectionism, the Iranian-Iraqi war, etc. The favorable changes attained amidst difficult conditions must be evaluated positively, but in full realization of the fact that the present situation is not problem-free, and that--as Ferenc Havasi also noted--improving equilibrium is not yet based on a solid foundation. This is reflected also in the large deficit of our balance of trade with the developed capitalist countries. In trade with these countries the limits to growth are our ability to export and the export opportunities.

In the discussion, several speakers noted that the duty disadvantages of Hungarian export to Western Europe were substantial, and therefore the trade-policy and other (for example, structural) possibilities of reducing these disadvantages should be investigated.

In the debate the need was emphasized to preserve the domestic market's equilibrium. There was general acceptance of that portion of Ferenc Havasi's report in which he said that the rising national economic costs were being passed on to the population only gradually, and that the way to maintain market equilibrium was by tightening the conditions for earning income, and not by restricting supply. However, civilized conditions for spending income must be ensured. The congress pointed out that the domestic market's equilibrium affects, even though indirectly, our ability to compete on foreign markets. It was noted that the proportion of imported consumer goods in retail trade declined somewhat in recent years, and that it was between 16 and 17 percent at present. The favorable effect of import was emphasized: competitive import prompts domestic producers to improve quality and effectiveness, and this improves also our ability to export.

#### Organization a Reserve of Effectiveness

In the section devoted to questions of the economy's organization it was emphasized that the system of institutions can and must be developed only in conjunction and interaction with the economic mechanism's entire system and the nature of the markets. Convincing arguments were advanced to prove that one reserve of effectiveness was in the organizational system. Most of the contributors to the debate concurred with the organizational measures to date, although some felt that organizational stability was required amidst the rapidly changing economic conditions. Although the section did not adopt this view, it emphasized that the present methods of introducing organizational changes had to be modified, paying closer attention to the time required for preparation and to the human implications of organizational changes. It is important not to regard any single organizational form as absolute. Since also in the future the enterprises cannot be expected to initiate their organizational transformation themselves, it will not be possible to dispense with central measures.

In principle, today any enterprise can obtain the right to export directly. In specific cases, the question of when it is expedient to exercise this right can be decided by carefully weighing the advantages and drawbacks. The experience of industrial enterprises authorized to export directly indicates that they are successful in export when the foreign-trade organization has been integrated into the production enterprise, and where the entire enterprise has become export-oriented. In other words, it is not enough to legally attach the foreign-trade organization to the production enterprise, if there is no change in the production enterprise's

style of operation and management. The examples of enterprises confirm that their foreign-trade activity is successful when the entire enterprise is marketing-oriented. Marketing is not solely the task of a single enterprise subdivision; it must assert itself also in research and development.

Within domestic trade, the organizational and self-interest changes begun in 1980 are continuing. The principal direction of these changes is the liquidation or weakening of monopoly situations. In some branches of domestic trade it would be expedient if the industrial production enterprises were to take over wholesaling. Despite the achieved results, competition within domestic trade is still limited and weak, and the methods and forms of organizational changes have not been clarified adequately.

At the section's session, relatively little experience was reported by the enterprises that have become independent since July 1980.

There was agreement on modernizing owner management and supervision, but the details were not debated. In conjunction with the development of small enterprises, the section emphasized the importance of strengthening political and economic confidence. The section pointed out that the risk must be realistically assessed in the financing of small businesses and in attracting the population's monetary resources.

The topic chosen by the 21st Congress of Economists is of outstanding importance and relevance, and this applies equally to the government, the economy, and economic science. The questions concerning the new path of economic growth embrace every level of economic life, the process of innovation in a wider sense, production, and sales. The debate and exchange of experience attained a high level, as befits the chosen topic. The debate was characterized by comprehensive analysis of the present situation, and by a constructive search for solutions. In his report Ferenc Havasi called attention to the fact that we could not expect favorable changes in the external conditions of economic work. In the solution of our problems it is essential to rely on our own efforts. Both the critical comments and the proposals at the congress appeared to be imbued with this sense of reality.

The enterprises were interested primarily in the organizational questions that affect their basic interests, and in the discussion of the system of regulation. But incomprehensible is their lack of participation in the discussion of the questions pertaining to planning and the world economy. The contributors to the debate in these two sections were almost exclusively scientific researchers and specialists in the management of the economy.

It is regrettable that few experts from agriculture and the food industry, and from the service industries contributed to the debate, while the construction industry was not represented at all. Yet these sectors have numerous specific tasks to solve in the course of the changeover to the new path of economic growth.

On the basis of the interest expressed at the congress, and of the tasks awaiting solution, several conferees proposed that the 22nd Congress of Economists place on its agenda a discussion of the economy's system of institutions (its organizational system).

HUNGARY

HUNGARIANS VIEW GATT, CONDITIONS ON WORLD MARKETS

Budapest HETI VILAGGAZDASAG in Hungarian 1 May 82 pp 4, 5

[Interview with Janos Nyerges, the Hungarian government's special representative in international organizations, by Mihaly Muranyi; date and place not given]

[Text] The system of institutions that has reliably served world trade for nearly 30 years is undergoing a crisis. A brief press report prompted us to interview Janos Nyerges, the Hungarian government's special representative in international organizations, on how he regards the crisis of the organization of world trade.

[Question] A brief press report recently informed the public that the GATT Council discussed the problems encountered in trade between Hungary and the other contracting parties to the General Agreement on Tariffs and Trade (GATT). Did some exceptional reason necessitate this investigation?

[Answer] There is no question of any exceptional reason. A work group that regularly investigates every other year the problems of trade between Hungary and the other members of GATT submitted its report to the GATT Council, the executive organ between sessions. This work group was formed in 1973, at the time when Hungary acceded to GATT. It investigates, among other things, how Hungary and the contracting parties to the General Agreement on Tariffs and Trade are fulfilling their contractual obligations. The report on this was the one that the GATT Council recently discussed in Geneva. In other words, this was the event reported briefly in the press.

[Question] Is there anything with which the member nations are dissatisfied? Did they criticize Hungary's trade policy?

[Answer] No significant criticism of Hungarian trade policy, and of our system for managing the economy, was voiced. However, our partners did raise a number of questions. For example, they asked us when the forint would become convertible in foreign trade. We replied that we had no firm date in mind. We were also asked to what extent were foreign-trade decisions in Hungary decentralized, and how much say the enterprises had. We replied that decentralization was continuing, and that more and more Hungarian enterprises were being authorized to import and export directly, so that competition could be made to serve economic development also in Hungary.

[Question] What did we object to?

[Answer] We reported that the Common Market countries had not dismantled the discriminatory quantitative restrictions hampering our export, despite the fact that they had pledged to do so. Incidentally, these restrictions affect 25 percent of Hungary's industrial export and thus are by no means negligible. It is noteworthy that the representatives of the most important trade powers supported our standpoint. The Hungarian delegation argued that these restrictions were being maintained by EEC members, and not by the community as a whole. Here the community merely serves as a screen. We also explained that we were willing to negotiate with individual countries on ways to end the restrictions, and that we were ready to assume voluntary restrictions should Hungarian exports demonstrably disrupt some market. But only if the Common Market countries end their discriminatory restrictions on Hungarian goods.

[Question] Today the international trade press uses the word "crisis" perhaps the most often. It can be read fairly frequently that the winds of change--disintegration--have reached also GATT. What is your opinion on this?

[Answer] International trade policy is truly in a crisis. And since GATT represents the contractual framework, anyone who speaks of the crisis of international trade policy is also speaking of the crisis of GATT. What is involved here? A number of very important key countries and country groups are pursuing a policy of isolation, instead of adjusting and transforming the economic structure. Which means that a series of basic GATT rules and contractual obligations are not being observed, and measures are being adopted that are detrimental to their partners. All this has led lately to very many litigations, for the General Agreement on Tariffs and Trade is a contract that allows litigation to settle disputes. Since the present situation poses the danger that the entire system of international trade could go bankrupt, the contracting parties to GATT decided to hold their next session, scheduled for the end of November of this year, at the ministerial level. Specifically to settle these matters, to compel compliance with the GATT rules, to strengthen these rules and amend them if necessary. All this to ensure, in this extremely difficult situation, the continued assertion of most-favored-nation treatment, which in trade policy means the basic principle of equality. Otherwise a free-for-all will develop. This would be extremely dangerous and would actually mean a state of war in trade, with serious economic and--predictably--even political consequences. Admittedly, short-term interests might compel a country to disregard the accepted rules of international trade, but it is obvious that such measures would evoke counter-measures by the other countries. If this were to become frequent, the entire system could disintegrate. It could cause more harm than if the countries--relegating their momentary interests to the background--attempt to adjust to one another and return to the observation of the GATT rules.

[Question] From the events in the world economy one can draw the conclusion that the strongest economic powers are the ones most likely to violate the rules of the game. Is this really so?

[Answer] First of all, today it is still an open question whether the economic powers will alter their practices. However, it is likewise obvious that this is not merely a question of whether the given countries have the good intentions to take such a step. For this is also clearly in their interest. GATT, we might say crudely, is a battered raft on an exceptionally stormy sea. Everybody is on this raft. If they start to fight, the raft will fall apart. The raft might be

decrepit and not worth much, but it is still better than if everyone had to swim in the sea, throttling others in order to reach shore. Every country must consider whether to wreck this raft or lifeboat, which represents the rules of international trade, or to double up slightly and waive its momentary interests, so that the lifeboat will not capsize and will keep the country dry. Every country must decide this for itself. The great powers, of course, have more influence. It is possible to be saved even without a lifeboat. But the shore is far away, and few swimmers can reach it without assistance. For every government it is at least as important to recognize this as the need to protect the momentary interests of its threatened industries.

[Question] What is more likely to happen: a return to the present norms or a reform of the GATT contract?

[Answer] Both. One does not exclude the other. But there are basic rules without which GATT could not exist. One such rule, for example, is most-favored-nation treatment. But there are also rules that must be reviewed in the light of the new requirements; for example, the questions relating to subsidies, and in certain respects also the problems of trade in farm products.

[Question] Negotiations have not even begun, and time is slipping away. Past practice indicates that it takes long years for the many contracting parties to GATT to reach agreement. Should we not be concerned that time is running out?

[Answer] The danger that the system on which entire international trade is based will disintegrate is much greater today than ever before. Time has already slipped away.

[Question] You mentioned that litigation also is possible in GATT. Has Hungary ever been a plaintiff or respondent?

[Answer] This "litigation" means that every contracting party must take cognizance of another contracting party's complaints and comments against it and must consult with the other contracting party on this. If there is no agreement between the two contracting parties, the matter is referred--for examination and recommendations--to a committee or group of experts appointed by the contracting parties to GATT. The countries concerned must take this into account. Such proceedings are in themselves significant, especially if a small country files a complaint against a stronger one. The situation here is similar to a well-lit major thoroughfare that is full of pedestrians and where also a policeman is present. This in itself could deter the stronger individuals who tend to be disorderly. It is no accident that the Common Market is constantly urging the small socialist countries within GATT into the dark alley of bilateral negotiations outside GATT.

Otherwise we have been neither plaintiff nor respondent before GATT, and we do not aspire to either role. We wish to resolve our problems by mutual agreement, primarily on the basis of our pledge to fully observe the GATT contract. But we also have the right to demand full compliance from our partners as well.

[Question] After Hungary acceded to GATT, the contracting parties occasionally criticized our system of managing the economy, with reference to reports in the Hungarian press. Are there any examples of this today?

[Answer] There is none. The further development and changes that have taken place within Hungarian economic management confirm that we are pursuing what we have undertaken within GATT, the external economic policy that we presented there. In this respect Hungary is not being criticized at all within GATT. Of course, the external economic situation has affected us as well, in the same way as it has affected others. But we have not adopted restrictive measures, and at most we have proceeded more slowly than we would have liked toward opening up our economy.

[Question] Hungary's share of world trade is not more than a few tenths of a percent. Under these circumstances, is membership in GATT more a question of prestige, or does it offer us real advantages?

[Answer] Hungary did not accede to GATT merely to be able to print this fact on its business card. Hungary acceded because GATT is an agreement that offers contractual obligations and rights, and the balance of these rights and obligations offers advantages for the Hungarian economy. Most important of all, we irrevocably and unconditionally enjoy the advantages of most-favored-nation treatment in trade.

[Question] But practice shows that this is not always so.

[Answer] So far as the balance is concerned, a series of countries have dismantled discriminations against us, but there are a few countries that have not done so. These discriminations apply primarily to consumer goods, light-industry products and a few chemicals. On the basis of the GATT contract, however, mutual agreements can be concluded regarding the export of so-called sensitive items. We have such agreements with the Common Market, for our textile and steel exports. In the same way we are negotiating with the Ten also on the questions of trade in farm products.

[Question] Much is being said these days about "voluntary" restraint of export. But hardly anyone believes that, say, Japan ships fewer cars to the American market of its own choice. Hungary, too, has undertaken to voluntarily restrain its export of textiles and steel, specifically to the countries of the Common Market. But to a reader hardened by news of the world market it would seem that this voluntariness should be placed in quotes also in the case of Hungary.

[Answer] Yes and No. It is in quotes because we too are subjected to some pressure not to disrupt the market in the case of sensitive products. But there are no quotes because the GATT rules clearly state that the importing country has the right to adopt protective measures in cases when a commodity is placed on another country's market under such conditions, and in such quantities, that it disrupts, or threatens to disrupt, the market. Here the question is merely whether the objections raised by the importing countries against Hungarian export are truly realistic. Our experience in general is not unfavorable. These measures have served well our opportunities to penetrate the market. In the final outcome, of course, it is also to our advantage that the markets in which we are interested do not collapse, and their prices do not fall below realistic limits. This could cause more harm to Hungary than the assumption of obligations in the interest of maintaining orderly market conditions.

It is likewise not indifferent to us that we are a party to a contract and a member of a body that not only debates trade policy but also adopts decisions. Our activity and role in this body are such that we may safely say: no decision affecting us is made without us.

[Question] Several socialist countries also belong to GATT. Some of them must cope with rather difficult economic problems. Has this question also been raised?

[Answer] No. GATT is unsuitable for solving economic problems. GATT is concerned with trade policy, with the rules of the game. This in itself does not create trade. No trade-policy measure or contract can provide more merchandise, better quality, a suitable market organization, adjustment of the output to the demand or strong competitiveness. Every country must provide these on its own. No contract--whether GATT or other--can ensure for a country that its products will be competitive and will fetch a good price. In the final outcome, GATT is a trade-policy traffic regulation. A red, yellow or green traffic light will not invite a single car onto the road, and will not make any car a good car. Nor will it make any driver a good one. But it is suitable to help avoid collision. It neither does nor can do anything more.

1014

CSO: 2500/250

SMALL BUSINESS REFORM SUCCESSFUL AT LARGE METALLURGICAL FIRM

Budapest ESTI HIRLAP in Hungarian 31 March 82 p 4

[Interview with Istvan Horvath, director of sheet and plate metal factory section and Ferenc Kiszli group foreman) by Laszlo Horvath: "Small Projects for a Large Industry"]

[Text] [Question] Who would have thought that a report on small enterprises would ever be written at the Duna Metalworks? We believed that the steel giants would never accept that which the work partnerships set forth. Yet the giant at Dunaujvaros was one of the first to awaken and created a small

Sought Product

[Answer] "When the idea of a work partnership first came up, we admit, we were frightened," says Istvan Horvath, director of the sheet and plate factory section. "Beforehand, we were missing many people. The machine decides the tempo of work here: the pace here is fast. Here, perhaps, man is too close to iron and steel, and this meeting is far more exhausting than any other work. If these people could make more money performing easier work, we would have to close our gates. Thus we have had to step ever more quickly, until we can dictate our conditions; if we had to outbid already excellent offers, the situation would become impossible. Thus the question arose: how could we pay more to the best workers?"

[Question] How was it possible to establish a small work partnership within a large industry?

[Answer] For years we were unable to produce enough light steel mechanisms from cold-drawn profiles. We have two goals: to provide a potential for additional income, and to ease the strain on the market.

At the Duna Metalworks, the organization was accomplished in the most simple way. The machines continue to manufacture the various steel mechanisms after the work shift is over.

[Question] How does this method differ from overtime?

[Answer] One can earn more this way. During overtime--within strict boundaries--the workers can make no more than time and a half, and often not even this much. However, with the small work partnership, they can earn two to two and a half times their [normal] wage. If we were forced to subcontract the production of these light mechanisms, which are even in demand on foreign markets, then our expenses would rise to three times their present amount.

[Question] Thus the arrangement is beneficial to the Metalworks. And to the workers?

[Answer] There are those who spend 16-18 hours a day in the factory. This is truly not a small feat. Yet the workers were positively pleased with the opportunity. Now they can calmly earn inside the factory walls the same money that they would have had to chase in doubtful secondary occupations or unsteady side jobs.

#### Organizational Ideas

[Question] Did anyone doubt the usefulness of this action?

[Answer] Yes, I did. I feared a few things. First, this is a metallurgical industry. Here, the elite worker stands very close to the melting metal. However, for these workers it is now impossible to form a small work partnership. This is an interesting situation: those that accept the most responsibility in the factory cannot earn additional pay. Second: who knows how tired the workers will get after the first quarter-year? Namely, this is when the contract expires. Can the workers stand this strained work for three months? However, the present observations disaffirm these considerations.

[Question] Hasn't the regular work shift become an eight-hour rest break?

[Answer] From the very beginning, we cautioned the workers that there would be no windfall money. We will only pay the income earned in a work partnership if production remained at one hundred percent during regular time. There has never been a need for income deductions. Whoever accepts a work process will stand by it, morning and afternoon. One more interesting point: more and more good organizational ideas are popping up.

Work group foreman Ferenc Kiszli was among the first to enter the work partnership.

[Answer] There were a few who thought money would now float into their palms. We lived through some hard times, before we grew accustomed to the new system. Many performed different tasks in the morning and the afternoon. We had to get used to the new work, the new rhythm.

#### Just Three Months

[Question] Is it possible to bear this tempo?

[Answer] It is possible. The labor must be better organized, we must think more, and we must not rush about unnecessarily. Also, we must not forget one thing: we only contracted for three months. We began in February, and we will finish in April. During this time, we will earn 20,000-25,000 forints extra. Everyone here is saving for something; for me, these three months mean a new car. This was a necessary tradeoff.

9890

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INTERVIEW ON ECONOMIC PLANNING PUBLISHED

Warsaw TRYBUNA LUDU in Polish 16 April 82 p 3

[Interview with Ryszard Cwiertnia, member of the secretariat of the Commission on Economic Reform, by Ryszard Bilski: "Planning Under the Conditions of the Economic Reform. New Law--New Practice"; date and place not specified]

[Text] It is generally accepted that our plans were always good; their execution, though, presented a darker picture. Belated and incomplete implementation is viewed as the chief cause of the recent collapse of the economy and the crisis that has engulfed our country. Do you share this view? I am addressing this question to Ryszard Cwiertnia, member of the secretariat of the Commission on Economic Reform.

[Answer] I agree with only a part of this opinion: that had all the tasks been implemented fully and on time we would not be facing all our present troubles. But the fact that we were not able to fulfill the plans means also that they were not realistic.

[Question] The implementation is as good as the plan....

[Answer] It is a too simplified explanation, but there is some truth in it.

[Question] Does the present, modified system of planning guarantee realistic goals? How does it differ from the old one?

[Answer] First of all, the system of planning has been put in order and it has been recorded in a Sejm law.

Long-range plans received a specific lead time--10 years. After 5 years, a new plan for the next 5 years will be prepared. Thus, in crucial matters a planning body would be acting with a quite clear view of a 10-year perspective. The 5-year plan will rank as a decision-making document.

[Question] The old 5-year plans also had a decision-making character....

[Answer] Yes, but their tasks were assigned according to the management structure. The tasks were assigned by the Planning Commission to the associations; they in turn assigned the tasks to the ministries; the latter assigned the tasks to the enterprises.

The 5-year plans were subordinated to the 1-year plans. The whole central plan was preoccupied with short-period guidance, usually 1-year periods. The 5-year plan actually did not count at all as a guiding tool. The central 5-year plans cannot be changed now without the Sejm's approval.

To put it differently, a system has been established to guarantee that the 1-year plans conform to the 1-year "segments" of the 5-year plans, and not the other way.

[Question] Medium-range and long-range planning have been eliminated from economic life. But, there was also much talk about the rank of those plans....

[Answer] The return to the old ways is out of the question, since the function of the central plan has changed, including the 10-year, 5-year and 1-year plans. What is particularly important, the central plan will not be divided into assignments for the particular organizational units.

The old planning structure--Planning Commission, ministries, associations, enterprises--has been abolished. Of this system, only the central plan and the plans of individual enterprises remain. The latter ones can be assigned few tasks under particular circumstances, such as tasks resulting from international agreements or defense commitments or in the case of a natural disaster--nothing more.

The desired production level will be attained with the help of economic tools: cheaper credit, higher prices, duty, lower tax. In some justified cases a subsidy is permissible. But there will be no resort to directives.

[Question] How will the mutual informing and inspiring of the central and enterprise plans work?

[Answer] The 1982 central plan perhaps is not yet the best example, but the future plans will already have a more informative character. The central plan should provide the enterprises with concrete information; e.g., whether the extraction of coal would increase, if there would be more steel, which semifinished materials and raw materials would no longer be rationed. Price prognoses would be published--what would be more expensive and what would be less expensive. Such information would be extremely important for the self-financing enterprise, since it would allow for the optimization of its economic decisions.

Naturally, the plan would include, so to say, all the routine elements related to the national income, population's income, etc.

Such comprehensive and honest information included in the central plan is intended to achieve unit and harmony of interests and aims in both areas—micro (the enterprise) and macro (the nation's economy). The aim is to make a proper choice in the planning process, not to manufacture unnecessary products that somebody bought some time ago because he had some kind of an allotment for them, or that were exported because the state had subsidized such an export. There will be no more such practices.

[Question] The law on socioeconomic planning will become binding July 1. Some enterprises would like to apply it already; other enterprises are apprehensive that even after July 1 planning according to that law will not be possible because the old ties and structures will not permit it....

[Answer] There are no barriers against the application of the law on planning now. After all, it does not alter the decisions of the earlier law on enterprise now in force. It has recognized the principle of independent activity of enterprises, including the principle of independent planning. I would disagree, therefore, even more strongly with the assumption that there will be some blocks after July 1. Practically, the old structures do not exist. The branch ministries do not plan within the framework of a ministry.

The enterprises are already planning according to the new rules. It is not just a show, those are not phony plans made only in order to obtain some funds, those are working plans, they are honest and practical.

In many cases they are not and will not be 1-year plans, but, for instance, 2-year plans. In this respect the enterprise is totally free; it can plan for any period of time. Often its plan is related to the completion of its modernization program, a period of application of new technology, etc.

[Question] Therefore, on July 1 it would not be announced: all previous planning is now invalid, you have to make new plans....

[Answer] In the economy guided by economic laws, one that has renounced the use of directives, nobody would venture something like this, to say nothing about demanding this. Besides, why should he, if the law has sanctioned existing practice.

[Question] We are introducing economic reform under an acute crisis. The possibility of independent planning will be restricted, for instance, by shortages of raw materials and semifinished materials. What will be done in order to make—in spite of such restrictions—the enterprises' plans genuinely their plans, from beginning to end?

[Answer] There are shortages, but no targets will be imposed on an enterprise. The enterprise itself can and should draw proper conclusions from the shortage of steel. In such a case it should not only use it economically, utilizing simple methods; it should also improve the construction and technology and even consider radically changing the range of products that it manufactures.

Some producers of semifinished materials and raw materials will have a limited freedom in selling their products because of the state monopoly of distribution. It is not easy to imagine a situation when, for example, a coal mine during a coal shortage sells its coal abroad instead of supplying our own factories.

I am convinced of the indispensability of operational programs, but I am aware of the need of their continuing verification.

Programs were prepared in specific conditions. The moment a relative saturation of the market is achieved, such programs should be abandoned in favor of the independent plans of the enterprises.

[Question] How long will the process of adaptation of all the links or planning units last? To put it differently, when will the efficiency of the new planning system be fully guaranteed?

[Answer] It would depend on the balance of forces—those that favor and those that oppose the reform process. They seem to be equal. The balance will tilt; the reform will grow in strength, including the political strength; a decisively better integration of the society with the aims of the reform will take place.

The next planning cycle—that is, the 1983 one—should proceed totally according to the new ways.

9644

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DEVELOPMENTS IN ENERGY INDUSTRY DESCRIBED

Chemical Processing of Coal

Warsaw ZYCIE GOSPODARCZE in Polish No 13, 18 Apr 82 p 3

[Interview with Prof Dr Jozef Obloj, vice director of the Institute of Industrial Chemistry, by Krzysztof Bien : "What Prospects for the Coal Tar Chemistry?" date and place not specified]

[Text] [Question] The first epoch of coal chemistry ended with the Second World War. After the war, the oil era came, at first as a fuel and later as a chemical feedstock. Since the so-called "oil shock" of 1973 there has been talk about returning to coal as a chemical feedstock. Is this a realistic perspective, and, if so, how realistic?

[Answer] Certainly, all over the world the significance of coal as an energy-chemical raw material has been on the increase since the 1970's. This is due both to the rise in oil prices and to considerable potential coal reserves, which account for 74 percent of all global energy reserves. Three main methods of coal processing and utilization are known so far for energy generation, chemical production and motor fuels production. These methods are based on carbonization, or coking, of hard coal, (so-called low-temperature carbonization of brown coal) with further utilization of liquid by products and coke-oven gas by the chemical industry; gasification with further utilization for power generation, for chemical synthesis--for example, of methanol, higher alcohols, ammonia or the synthesis of liquid hydrocarbons by the Fischer-Tropsch method, which was used earlier--and, finally, liquification (hydrogenation), which can provide motor fuels.

An estimated 90 percent of all coal processed in the world by these three methods is used for carbonization, or coking, and low-temperature carbonization. Many countries also employ industrially the gasification method, still however in its so-called first-generation mode. More efficient methods of gasification and of liquification as well are still being studied in laboratories and experimental plants. Work in this field is the most advanced in the FRG, United States and USSR.

[Question] Where do we stand on this, being a country exceptionally well-endowed with coal? For years, there has been talk of coal as an opportunity for the Polish chemical industry. Our entire chemical industry "leans" on oil. At any rate, the facts suggest this. A decrease of oil imports has undercut our chemical industry.

[Answer] Since 1975--i.e., the time the PR-1 [Program Rzadowy] Research Program entitled "Comprehensive Coal Processing" started--work on the wider use of coal as a chemical raw material has been underway in Poland as well. The work has not been progressing as fast as we would like and as economic needs require. Unfortunately, the pace of this work also depends on our opportunities. Outlays required for the start up of industrial coal-processing installations are very high.

We use only hard-coal coking on an industrial scale. One ton of dry-charge coal yields 750 kilograms of coal, used largely in the iron and steel industry, about 35 kilograms of high-temperature tar, about 3 kilograms of other tars, about 10 kilograms of crude benzene and about 350 cubic meters of coke-oven gas, which can be used as heating fuel or as raw material for producing, among other things, ammonia and subsequently nitrogen fertilizers.

In 1978, when utilization of production capacities was closest to 100 percent, the coking of about 25 million tons of coal yielded about 20 million tons of coke, 875,000 tons of high-temperature tar, 84,000 tons of other coal tars, 232,000 tons of crude benzene and about 7 billion cubic meters of coke-oven gas. In 1980 and 1981, a decrease in production occurred, associated with the falling production of coke for the metallurgical industry.

[Question] The uses of coke are well known. What happens with those coal-derived wastes?

[Answer] First of all, I am not in favor of using the notion "wastes" since it generally conjures up wrong associations. Indeed, those are byproducts of the coking process; nonetheless, they are very valuable as chemical raw materials. They are valuable because they are rich in various ingredients; in coal tar alone there are several thousand ingredients. Opportunities for their utilization are tremendous. Byproducts can be used to produce plastics, paints and varnishes, pesticides, explosives, tanning agents, dyes, detergents, certain medicines. In a word, chemical byproducts obtained from tars and benzene can and should be substituted to a large degree for the raw materials that we are importing. Let us use the following comparison as an indicator of the profitability of processing byproducts from the coking process. If we take the value of element-type carbon in coking coal as 1, the same carbon in coke will be worth, in international market prices, about twice more, in tar oils--4 times more, in benzene--15 times more, in phenols and cresols--up to 40 times, and so on.

[Question] Have we taken advantage of these opportunities in practice and, if so, to what extent?

[Answer] This is a complex issue. We are taking advantage of it, sort of... however, not nearly as much as we should. We process coke tar and crude benzene, but by methods dating to the late 1950's and early 1960's. For about 20 years, nothing has been invested in the processing of coal-derived compounds. Therefore, it is not surprising that today this is an obsolete and depreciated industry, employing obsolete technologies harmful for the population and the environment (sewage, gases). These old technologies do not allow extracting compounds with an adequate degree of purity from tar and benzene. By "adequate" I mean the level required in modern chemical plants in our country and, of course, abroad.

For example, crude benzene that yields benzene, toluene, xylene and 1K resins is refined by an old acid method, which leads to a much lower-quality product and to toxic wastes. Chemical plants in Tarnow and Pulawy that produce semifinished products for the artificial fiber industry (cyclohexanone) from benzene require a raw material with a higher degree of purity. So, we must resort to imports--either of oil or of the raw material. In 1978, 1 ton of pure benzene cost us about \$600, whereas our "acidic" benzene fetched only \$200 to \$300, not without difficulties.

This is also the case with coke tar. Components distilled from this tar, including crude phenols, naphthalene and anthracene, are of characteristically very low purity. However, the processing industry, with its modern, stringent technology, requires pure raw materials, which we can only obtain by importing. At the same time, due to the lack of opportunity for upgrading processing in our country, coke tar is either exported for a mere pittance or burned in boilers instead of fuel oil that is in short supply. From the point of view of our state interests, this amounts to wholesale squandering. You cannot know this and be quiet at the same time.

[Question] You cannot listen to this and be quiet either... On the one hand, we have obsolete technology and installations; on the other, the PR-1 program aimed at the development of, among other things, modern chemical technologies of coal processing has been underway for 6 years. This work has so far cost us a pretty penny. Where are the results and what are they?

[Answer] The work has been progressing along several avenues. The most advanced research has been done on utilization of coal-derived byproducts of the coking process. There are some results. Five technologies that can be implemented on an industrial scale have been developed. The fruit of the other avenues of the PR-1 program has been more modest; thus, quite recent coal gasification and even liquification projects will not be carried out soon. This is also a result of the estimated cost of respective industrial undertakings. Of course, construction of small experimental installations is not to be ruled out. However, the coking industry and the coke chemistry, which is associated with industry and based on liquid products, remain the main mode of coke utilization, beside burning for power generation.

[Question] You say "five technologies that can be implemented on an industrial scale" have been developed. What technologies are they? Why are they not being implemented?

[Answer] Technical specifications for a pure anthracene unit with a capacity of 4,000 tons a year have been prepared. Anthracene is used to produce anthraquinone—a semifinished product for valuable anthraquinone and indathrene dyes (used in dyeing fiber and also in producing paints and varnishes) and also as a reaction compound for the paper industry. In 1980, the cost of the plant was calculated at about 400 million zlotys. Anthracene is readily marketable abroad. The current price is \$2,500 to \$3,000 a ton.

This year, specifications for an anthraquinone unit produced from anthracene will be prepared. The estimated cost of construction in the 1980 prices is about 250 million zlotys.

An experimental unit of pure (crystalline) naphthalene has also been designed, along with specifications for an industrial unit. Costs of about 200 million zlotys (in 1980 prices) are envisaged.

A design has been completed of an industrial phenols unit based on a new nonwaste method of production from coke tar (from carbofic oil). Two years ago, the investment outlays were estimated at about 200 million zlotys.

Finally, design has been completed for the largest undertaking in the scope of the PR-1 program, namely, for hydrorefinement of crude coking benzol. The project, for which technicoeconomic characteristics have already been confirmed, envisages refining 300,000 tons of benzol to 212,000 tons of pure benzene, 39,000 tons of toluene and several dozen thousand tons of other valuable semifinished chemical goods. In the 1980 prices, envisaged investment outlays are as high as 2 billion zlotys. This is a large sum. However, should we account for the value of production in world market prices, the costs would be recouped in less than a year of the plant's operation.

Work is underway on updating these outlays according to current prices. However, these sums give a certain idea of the outlays in question. In a word, our needs are a fact of life, but then so are the limitations that keep our hands tied. Due to them, the draft proposal to start construction of a benzene-processing unit has been eliminated from the list of current investment projects, despite its significance. There is a shortage of funds, especially foreign exchange. With regard to smaller ventures—i.e., installations producing anthracene, anthraquinone and naphthalene at Zch [chemical plant] in Blachownia, where these units are to be erected—the opportunity of construction with their own means and funds is being considered. No decision has yet been made.

[Question] I am not going to call investment difficulties into question. However, in this field, which has been neglected for years, no benefits can be obtained without some investment. We must, therefore, break this vicious circle. Maybe we should first resort to adjusting some installations and industrial enterprises for the chemical processing of coal. This is not the optimal solution (but then again, it might be). However, it is always better to take a half or even quarter of a step ahead, than do nothing and wait. Using that philosophy, we will never see the end of the crisis.

[Answer] You are right. The problem of utilizing existing Polish installations for the chemical processing of coal derivatives after adjustment or minor remodeling has been considered. Specifically, these considerations involved the plants in Plock and Blachownia and some other locations. However, this is a difficult matter, since none of the plants has long-term capacity reserves. Therefore, decisions should be made in a wider context.

Two further circumstances are paramount for mapping our strategy and making final decisions. Firstly, the construction of chemical coal-processing units does not in principle require machinery imports. We can produce domestically everything that we need. When the concept of erecting a benzene hydrotreatment unit was under consideration for the first time, the now-defunct Metalchem association offered to deliver necessary equipment. Enterprises that formerly belonged to Metalchem should stand by the offer.

The second consideration is our CEMA membership. We can and should embark on specialization in modern coal tar chemistry. No other CEMA country has advanced that far in chemical coal-processing research. Due to this, our specialization in this field will lie in everybody's interest. The processing chain from coal through various coal-derived semifinished products to dyes, paints, varnishes, plastics, etc., can and should shape this specialization—to our benefit as well to the benefit of our socialist partners.

[Question] Regardless of the rationality of this particular proposal, it points up a wider problem, mainly that of potential integration opportunities both parties have failed to take advantage of. This, however, is a topic in its own right. I thank you for the interview.

#### Biogas from Waste Materials

Szczecin KURIER SZCZECIŃSKI in Polish 2 Mar 82 p 4

[Article by Jacek Dec: "Biogas"]

[Text] Installations for airtight fermentation of waste materials such as manure, straw, vegetable and beet tops, potato stalks, wastes from alcohol distilleries, breweries, dairy plants, fruit and vegetable-processing plants have been promoted and installed on farms, enterprises

of the food industry and also municipal sewage treatment plants in many Western countries as a result of the recent energy crisis. Through the fermentation of these wastes, flammable gas of high calorific value, or so-called biogas, can be produced (a average 6,000 Kcal/cubic meter).

Valuable biogas can be used for heating, for gas ranges and also for generating electricity if a combustion engine coupled with a power generator is installed. About 32 biogas installations are in operation in Switzerland. India has 70,000 of them. In China, about 5 million simple installations are in operation. Poland has 4 installations. Technical specifications were prepared in Szczecin for a biogas installation at the hog farm in Kolbacz in 1979; however, this venture has not been carried out. Besides energy benefits, biogas installations provide significant opportunities in environmental protection. The so-called farming methods of manure management, when manure is used as a fertilizer, cause gradual soil degradation and water pollution. Pollution is also caused by toxic sewage from alcohol distilleries and dairy plants. By applying methane fermentation to manure, other wastes and sewage, a decrease is achieved in the contamination of natural environment by substances broken down into simpler compounds in the process of fermentation. These compounds are easier to absorb for the natural environment. Also, a majority of contagious bacteria, eggs and larvae of parasites, weed seeds and unpleasant smell are eliminated.

In Poland, about 120 million cubic meters of manure are generated, which can yield 2,500 million cubic meters of biogas (1.5 million tons of oil equivalent). If, besides that, all sewage of the food industry is fermented (vegetable processing, dairy plants and alcohol distilleries), this amount can be increased severalfold. One cow can provide 0.1 to 1.8 cubic meters of biogas a day, one hog, 0.2 to 0.3 cubic meters.

I visited a biogas installation generating gas from manure in Niwy-Okraglik, run by the Energy Enterprise Czestochowa. Manure from the sty is fermented in two containers, 70 cubic meters large, where a temperature of 21 to 33°C is maintained. The generated biogas, with an average calorific value of 6,300 Kcal/cubic meter in the amount of 40 to 50 cubic meters daily, is stored in a bell-shaped gas container, which holds 40 cubic meters. Fermented manure is used as a fertilizer and, due to this, appreciable growth in rye and potato yields has been registered. Biogas is burned in a centralized heating plant, which substitutes for electric heating of 21 kW capacity. It is also supplied to two adjacent private farms. A gas combustion generator unit rated at 2 kW is a backup in case of a power blackout. The installation produces about 10,000 cubic meters of biogas annually. Additional information for those interested in biogas can be found in HORYZONTY TECHNIKI 1981, Nos 11-18.

9761

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ELECTRIC POWER MINISTER DISCUSSES ENERGY DEVELOPMENT PLANS

Bucharest REVISTA ECONOMICA in Romanian No 14, 9 Apr 82 pp 3-4, 14

[Article by Trandafir Cocarla, minister of electric power]

[Text] A particularly important problem for development of the Romanian economy is implementation of the program to produce energy and develop Romania's energy base. Proceeding from the national economy's requirements and taking into account the implications of the world energy crisis, the RCP CC adopted a decision at the recent plenum, one which establishes a number of measures and actions intended to provide for steadfast implementation of the energy program so that, in general lines, Romania by 1990 can insure its independence in energy and fuel. The new guidelines for development of Romanian energy and the decision adopted in this regard express the permanent care and concern of our party and state and of Comrade Nicolae Ceausescu personally with solving one of the basic problems of national economy development, of implementing the program to build the multi-laterally developed socialist society, a problem which takes on exceptional significance in the conditions of aggravation of the world economic crisis and of the energy and raw materials crisis.

Complex Utilization of Energy Resources

Energetics has enjoyed special attention from our party and state in the years of socialist construction as one of the vitally important branches for all social-economic activity. Year after year, massive investments have been provided in the country's development plans to create new energy-producing capacities and to modernize the entire available potential. As a result of the conditions created and the successful fulfillment and achievement of the forecasts of the country's social-economic development plans, electric power production rose 32 times in the last 30 years, with corresponding development of installations for production, transport and distribution, within the single national energy system.

Parallel with this, electric power consumption also rose from 128 kWh/per capita in 1950 to 1,614 kWh per capita in 1970 and to more than 3,100 kWh per capita in 1982. However, it should be mentioned that gradually, in recent five-year plans, the average growth rate of consumption has slowed as a result of more sensible utilization of electric power in all areas of Romania's social-economic activity. Compared with an average annual rate of 13.7 percent in the 1961-1970 period, an average rate of 7.6 percent per year was recorded for the

1971-1980 period (Table 1). It should be pointed out that in the last two years of the period, that is, 1979-1980, the rate was even lower (3.9 percent).

Table 1: Evolution of Electric Power Consumption and of Total Industrial  
Total Industrial Production

<u>Evolution of Consumption, Industrial Production</u>	<u>1961-1970</u>	<u>1971-1980</u>
Average annual growth rate in electric power consumption	15.7	7.6
Average annual growth rate of industrial production	12.1	11.2
Ratio of growth rate of electric power consumption and growth rate of industrial production (indicators of advance)	1.30	.67

This lower rate became possible as a result of firm application of a broad program of measures for rational and efficient utilization of electric and thermal power. The main directions kept in mind were improvement in manufacturing techniques, restructuring of the production of energy-intensive materials, placing consumption standards back on scientific-technical bases, utilization of substitutes for the big energy-consuming products, providing incentives for the participation of all worker collectives in reducing consumption and preventing waste.

In accordance with the provisions of the Directives of the 12th party congress to have rational and efficient utilization of the country's energy resources, more and more it was necessary to build thermoelectric power centrals on inferior coal (lignite and bituminous shale), to develop thermification, to intensify the construction of hydroelectric power centrals, to carry out activities to prepare for the construction of nuclear power centrals and to utilize nonconventional sources of electric power. With regard to the thermoelectric power centrals, one primarily notes the intensification of use of coal in the production of electric and thermal power (from 26 percent in 1975 to around 33 percent in the current stage), together with reduction in the share of electric power produced on hydrocarbons. Also to be mentioned are the current concerns with increasing efficiency in the operation of the big thermoelectric power centrals by reducing the support of hydrocarbons on combustion in the boilers of lignite from the Oltenia basin, the building of installations to improve the preparation of lignite, application of improved solutions for transporting and handling it and recovery of residual heat from the cooling water and so forth.

Special attention is being given to the introduction and extending of thermification as an important means for saving on fuels. From the total power installed in the thermoelectric power centrals, those of thermification represent around 25 percent. With regard to hydroelectric power centrals, in the last 20 years one notes a continued growth in their share--from 5.2 percent to 17.5 percent in power production and from 11.8 percent to 20.7 percent in the power installed. At the same time, the degree of utilization of Romania's hydroenergy potential rose from 23 percent in 1975 to 30 percent in 1980. In this context we should also mention the numerous hydroelectric power centrals built on interior rivers, including those downstream and waterfalls, in order to utilize the investments from the basic centrals better.

The special actions were also undertaken to extend the power transportation and distribution networks. As much as possible it was sought in this area to extend the 20-KV step in the area of rural and even urban electrification, restricting the lower or intermediary steps. At the same time, a basic concern has also been to reduce losses in the power networks by having predominant promotion of solutions of maximum efficiency. In this regard, along with the solutions mentioned, other measures also have been provided in a broad program, such as enlargening the sections for the 400 kV-lines by assembling pipes with 3 x 450 OlAl/phase, compared with the previous solution with 2 x 450 OlAl/phase; the local production of the entire reactive power; optimization of the operational systems parallel with the elements in the network and so forth. Due to these measures the losses in the power networks have fallen continually from a value of 7.84 percent of total production in 1970 to 7.48 percent in 1975, currently having reached values below 6 percent.

In order to prevent damage and to limit their being extended to the level of the entire system, an automatic system is being implemented which provided for successively taking various measures, depending on the scope and persistence of the damage, the insularization of the big industrial platforms on their own centrals, automated start for certain groups in the hydroelectric power centrals in the zones lacking power, keeping some large groups of thermoelectric power centrals in operation only with their own services and so forth. With a view to placing this automation into operation, analyses and tests at the consumers are being carried out in order to make correlations between the degree of safety in operation of the installations on the platform and those in the power system as well as between the power of the priority consumers and that of the local sources which are to remain in operation, insularly, when there is an interruption of supply from the power system. At the same time, action has been taken to improve the activity of operation, maintenance and repair as well as to increase the personnel's qualifications.

#### Priority Directions for Power Development

The 31 March RCP CC Plenum Decision on Implementation of the Program for Energy Production in the 1981-1985 Five-Year Plan and Development of Romania's Power Base Until 1990 provides that measures continue to be needed to extend and improve the national electricity power system, to advance the building of electric centrals on coal, to utilize the hydraulic potential, to introduce new energy resources in the energy balance and to reduce the use of hydrocarbons. In order to reach an electric power production of 82.5 billion kWh by 1985 and 110 billion by 1990, a new power of 7,920 MW will be installed in this five-year plan, of which around 2,500 MW will be in the hydroelectric power centrals and 5,420 will be in the thermoelectric power centrals operating on coal, shale and reusable resources, while another 9,350 MW will be in the 1986-1990 period. Development of the industry, the high rate of housing construction, the needs for heat in the form of technological steam and hot water for heat require that all the thermoelectric power centrals be built as thermification centrals in order to produce electric and thermal power in combination.

By building new hydroenergy capacities, the degree of utilization of Romania's water potential will rise from 30 percent in 1980 to 45 percent in 1985 and to

65 percent in 1990. A power of more than 2,000 MW will be placed into operation on interior rivers in this five-year plan by predominantly building hydroelectric power centrals with complexes uses (irrigation, flood prevention, industrial utilization, fish breeding, transportation, recreation). Of the most important hydroelectric power centrals on interior rivers forecast to be built in this period we can mention Riul Mare, Dragan-Iad, Siriu-Surduc, Jiu Bumbesti, the one on the Olt River, Calimanesti, Turnu, Slatina-Danube sectors, the one on the Siret River, the Bistrita-Trotus sector, the one on the Somes downstream of Tarnita and the one on the Sebes downstream and others.

Special emphasis also is to be placed on building micro-hydroelectric power centrals. Of Romania's hydroelectric energy potential, evaluated at 40 billion kWh, nearly 2 billion are forecast to be produced by the micro-hydroelectric power centrals, with at least 500 of them to be set up by the end of 1985. In the 1986-1990 five-year plan the program to build micro-hydroelectric power centrals is to intensify on the basis of the inventory made of some new sites, with 1,500 micro-units to be set up in this period.

Referring to the building program for thermoelectric power centrals, it is necessary to stress that the installed power at the end of 1980 was 11,388 MW, of which 7,740 were in condensation centrals and 3,448 were in thermification centrals. The newest thermoelectric power centrals for condensation were built on the basis of coal. Among them, the centrals in Deva--1,260 MW--and in Rovinari--1,720 MW--stand out. Another four groups of 330 MW on lignite at the Turceni hydroelectric power central are being installed as well as more thermification groups on lignite of 50 MW at the Borzesti and Giurgiu hydroelectric power centrals and 120 MW in Craiova. The first thermoelectric power central operating on shale in Anina--supplied with three groups of 330 MW--is forecast to be put into operation in this five-year plan.

For the purpose of knowing the possibilities for development of thermification for a future period, 115 locations with large heat consumptions were examined. Among these, 60 have heat consumptions of above 150 Gcal/hour, which justifies installing thermification groups. Among the thermification centrals forecast to be built by 1985 we mention the ones in Giurgiu, Craiova, Iasi, Drobeta-Turnu Severin, Oradea East, Suceava, Bucharest, Bacau, Arad and others.

With a view to reducing the specific fuel consumption at the condensation thermoelectric power centrals in Paroseni, Deva, Doicesti and to freeing the hydrocarbons, the move was to adapt the particular groups and to supply the consumers in the area with heat. In the future it is forecast to move to the operation of condensation groups in the thermification system at the Rovinari, Turceni and Craiova-Isalnita centrals. Also for the purpose of freeing some supplementary quantities of hydrocarbons, the move is being provided to have certain centrals now operating on hydrocarbons move to coal, such as Pitesti South, Govora and others. Also, in order to recover the secondary energy resources existing at the big energy consumers, it has been forecast to extend the Galati hydroelectric power centrals belonging to the Ministry of Electric Power with two groups of thermification of 105 MW in the 1981-1985 period.

Another important area treated is also the move to implement the program to build nuclear power centrals. On the basis of the indications from the party and state leadership, measures have been established to speed up construction projects and to amplify the installed power initially forecast for the nuclear power centrals being built or for which work will begin soon. The Cernavoda central will be supplied with five groups of 660 MW each instead of the four groups forecast initially; in Moldavia a nuclear power central with three groups of 1,000 MW each is to be built, of which one group will be placed into operation by 1990; in Transylvania the third central, similar to the one in Cernavoda, will be set up so that the installed power in the nuclear centrals will be 4,500 MW in 1990, to reach 9,600 MW by 1995.

Implementation of the nuclear power program involves participation of the majority of the national economy's branches, who have the task of building production capacities, special materials, equipment, nuclear fuel and heavy water. The fact should be stressed that, in light of the recent work of the RCP CC plenum, appropriate measures were taken to speed up the projects and to strengthen the collaboration of all factors involved.

Drawing in other sources to increase Romania's energy potential also is in the attention of our specialists, as also was stressed in recent party documents. The multidisciplinary research done in recent years have brought out the opportunity for increasing Romania's total potential by having broad-scale introduction of installations to convert solar energy into heat for use in industry, agriculture, and the heating and preparation of warm household water, the use of the heat from geothermic waters at low temperature for the same purposes and use of wind energy in the low-power and medium-power installations. By turning these resources to good account and by energy use of urban waste as well as the techniques to obtain biogas from fermentation processes, the forecast is to obtain an energy contribution of 5.5 million tons of conventional fuel in 1985 and 7-10 million tons of conventional fuel by 1990. The installations to utilize new sources will be disseminated in a very large number of units, since each county, by using local resources, is to move to building such installations on the basis of programs approved.

The structure of electric power production will see important changes by carrying out the construction program for electric power centrals and utilization of new sources of energy (Table 2).

Table 2: Rise in Structure of Electric Power Production

<u>Distribution of Electric Power</u>	<u>1985</u>	<u>1990</u>
Electric Power Production, of which:	100	100
In hydroelectric power centrals	21.2	24.0
In nuclear power centrals	--	22.7
On basis of coal and shale	47.5	44.0
On basis of hydrocarbons	24.3	4.6
On reusable energy resources and new sources	2.2	4.7

## Improvement in Operation of National Energy System and Supply to Consumers

For the purpose of eliminating existing shortcomings, which in 1981 and particularly in the peak period of the winter of 1981-1982 caused difficulties for consumers, efforts will be made in the spirit of the tasks established by the recent RCP CC plenum to raise the level of operation of energy groups, to establish cadres and raise the qualification of operations personnel and to strengthen order and discipline in all the units. Measures are to be taken to improve working and living conditions for worker personnel in the locations where the electric power centrals are located, particularly in Turceni and Rovinari. Measures also will be taken for better organization of repair activity so that the time it takes to make them is less and so that, in this way, the entire volume of repairs is made with high quality, so that all groups are available when winter begins. Experimental modernizations for group 6 in Rovinari will be made for the 330-MW groups in Turceni and Rovinari during 1982-1983 in collaboration with the Ministry of Machine Construction Industry and new groups, operating on coal, will be provided even as they are assembled with these improvements.

We have in mind a series of measures and actions for amplifying and modernizing the coal warehouses for all the existing centrals so that the centrals are provided with stocks for a minimum of 30 days at the peak load for the winter period. Measures also will be taken for a quantitative and qualitative increase in the volume of spare parts in their own units and the volume of parts and reconditioned subassemblies will increase.

Implementation of the energy program approved at the recent party plenum requires a greater effort from scientific research. It is being called on to make a thorough approach to certain problems on the technological development and promotion of technical progress both in the area of energy production as well as its utilization with high economic efficiency. For this, the main efforts of the specialty institutes entering into the competence of our ministry will be directed toward research and toward establishing solutions to solve problems, such as:

Optimization of the charts for complex hydroenergy harnessing of waterways;

Working out economic solutions for replacing the additional hydrocarbons used to maintain the flame in the boilers on solid fuels in the thermoelectric power centrals;

Finalization and generalization of solutions for technical set-up of electric power centrals for the combined production of electric power and heat;

Research and providing of technical solutions to continue reducing losses in the transport and distribution of electric power through networks;

Through technical measures insure that the energy equipment is kept operational in the big centrals on coal and generalization of the technical solutions checked on the installations at the Rovinari thermoelectric power centrals;

Establish technical solutions and improved standards which would shorten the time it takes for intervention to maintain and repair energy equipment.

Implementation of the program to produce energy in the 1981-1985 five-year plan and for development of Romania's energy base by 1990 will provide better and better conditions for the sustained and multilateral progress of the national economy and to raise production and the national income, a healthy and sure foundation for increasing the standard of living for all our people.

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